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The Food Marketing Industries--

RECENT AND PROSPECTIVE STRUCTURAL CHANGES

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THE FOOD MARKETING INDUSTRIES--RECENT AND PROSPECTIVE
STRUCTURAL CHANGES 1/

One outstanding characteristic of the food marketing industries has been growth--growth to serve a burgeoning urban population and an expanding agricultural output. The volume of food products marketed for domestic consumption has increased by more than two-fifths since World War II. Export markets for these products have also grown. And the increase in the output of services performed by the food marketing industries has been greater than the growth in physical volume because of added marketing services, per unit of product handled.

This growth has been associated with major changes in the structure of the food marketing industries. Expansion in population and in agricultural production in many areas has created needs for new facilities and business enterprises. Growth facilitated the adoption of new technology. Growing markets made possible economies of scale.

One of the most significant structural changes has been the rise of supermarkets and large food retailing organizations. Besides producing great changes in the retailing of food, these large retail organizations have affected the wholesaling and processing of food products and even the selling of farm products. Many in effect became wholesalers, performing the wholesaling functions for many of the products they retailed. Many also participated in manufacturing by contracting for the manufacture of products meeting their specifications and packed in containers carrying their labels or by manufacturing products themselves.

Another structural change of note has been the trend to fewer but larger establishments--not only in retailing, but also in most food processing and in the assembly of farm products. Technological developments such as changes in equipment and improved transportation and communication did much to intensify this trend. Changes in ownership by purchase or merger also have furthered this movement. A surviving company often concentrated its operations in its most efficient plants, which often were its largest plants.

Technological developments and economies of scale that only relatively large plants can exploit have had a major part in improving efficiency in the marketing system. To the extent that gains in efficiency have been achieved, consumers and farmers as well as marketing firms have benefited. However, the competitive structure of the market for farm and food products has changed with the trend to fewer and larger food marketing establishments. The number of companies has decreased along with the number of establishments. Thus, in many food marketing industries there are now fewer buyers and sellers. In many areas, the firms buying from farmers are fewer and larger and they are likely to possess more extensive and accurate information about marketing conditions than is available to most smaller firms and to most farmers. Moreover, traditional marketing transactions have in many instances been bypassed, such as in the direct movement of fresh fruits and vegetables from assemblers to retailers without passing through city wholesale markets. These changes raise questions as to the extent and type of competition in the modern marketing system. The National Commission on Food Marketing has given major attention to these subjects in its 2-year study. It is scheduled to report on June 30, 1966.

1/ This article has been prepared by the Marketing Economics Division, Economic Research Service, USDA. The names of persons contributing to the article appear with the section each prepared.

Livestock and Meat 2/

Livestock marketing encompasses the host of activities and institutions associated with coordinating the supply of and demand for livestock. The participants in livestock supply are the farmers, ranchers, and feeders who produce and offer livestock for sale. The direct participants in livestock demand are the meatpackers, feeders, and ranchers who offer to buy livestock for their slaughter plants, feedlots, and stock herds. Many agencies and individuals offer their services to facilitate the buying and selling transaction and other marketing activities.

Changes in Livestock Marketing

Livestock marketing is changing in 3 important ways: (1) In methods of buying and selling; (2) in basis of sale; and (3) in transportation of livestock. Marketing firms or agencies have initiated some of these changes in a search for new and more efficient ways of doing business, rather than as a reaction to changes outside their control.

Some of the more obvious changes have been in the channels through which livestock move to market and in the methods by which they are sold (fig. 1 and 2). During the past 15 years, the volume of direct sales has increased rapidly. As recently as 1950, federally inspected packers purchased 75 percent of their cattle, 57 percent of their calves, 42 percent of their hogs, and 52 percent of their sheep and lambs at terminal markets. By 1964, packers had increased purchases through other channels so that purchases at terminal markets had declined to 36 percent of their cattle, 19 percent of their calves, 24 percent of their hogs, and 29 percent of their lambs. Even though the percentage of slaughter cattle purchased was down by more than half, actual volume was only 7 percent less in 1964 than in 1950. Volume of other slaughter livestock purchased at terminal markets decreased substantially between 1950 and 1964. Hog purchases declined 25 percent; sheep and lambs, 45 percent; and calves, 73 percent.

Increased direct sales to packers accounted for the relative decline in packer purchases on terminal markets. In 1964, 45 percent of the cattle purchased by packers bypassed organized markets and were bought direct from producers, feeders, or dealers. Thirty-two percent of the calves, 63 percent of the hogs, and 58 percent of sheep and lambs were also direct purchases. The percentage of livestock purchased by packers at auction markets changed very little--auction volume grew at about the same rate as livestock production.

Increased direct marketing has considerable impact on many segments of livestock marketing, including producers, marketing agencies, organized markets, and meatpackers. Producers selling livestock direct avoid some of the marketing costs, such as yardage and feed at organized markets. Transportation costs paid by the producers may also be reduced, depending on the distances to packing plants, buying stations, and public markets. The producer can act as his own selling agent and avoid commission charges, or hire commission services in areas where they are available. Commission agents are useful not only for their selling skill and knowledge of markets, but also to guarantee prompt payment and take care of other details of the sale.

Common marketing practices in direct selling may make it more difficult for the seller to evaluate marketing alternatives. Such things as "pencil shrinking," the time of day the livestock are weighed, and length of "stand" after livestock are taken off feed and water before weighing affect sale weights and net returns. Many producers, particularly the smaller ones, do not have sufficient information to evaluate the economic effect of the conditions of sale and to bargain effectively with prospective

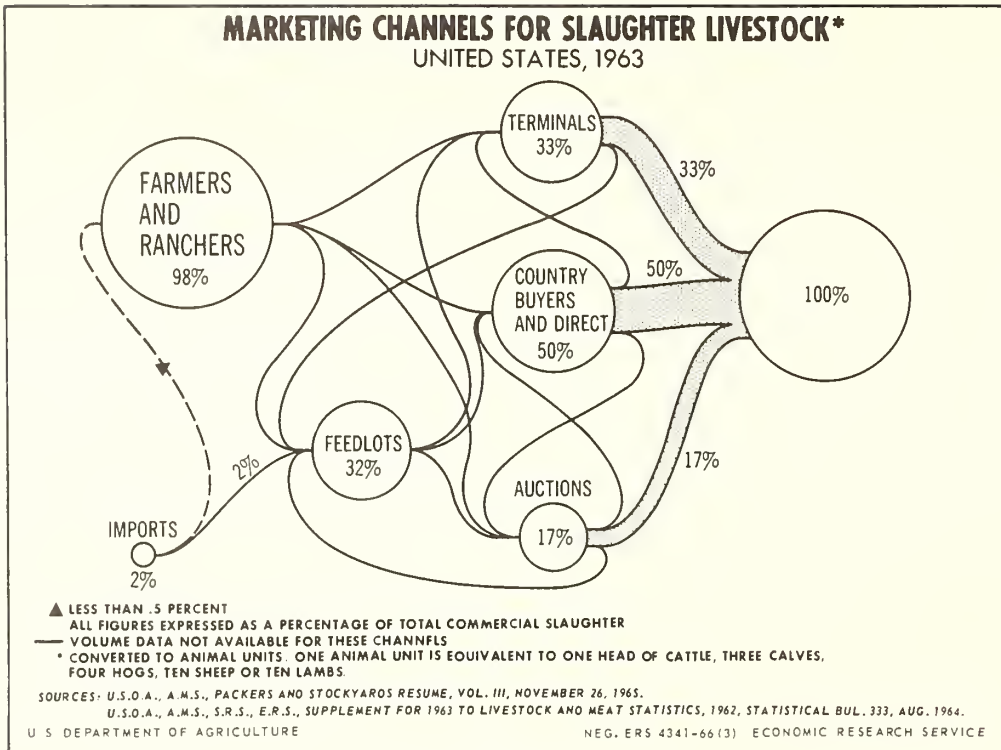


Figure 1

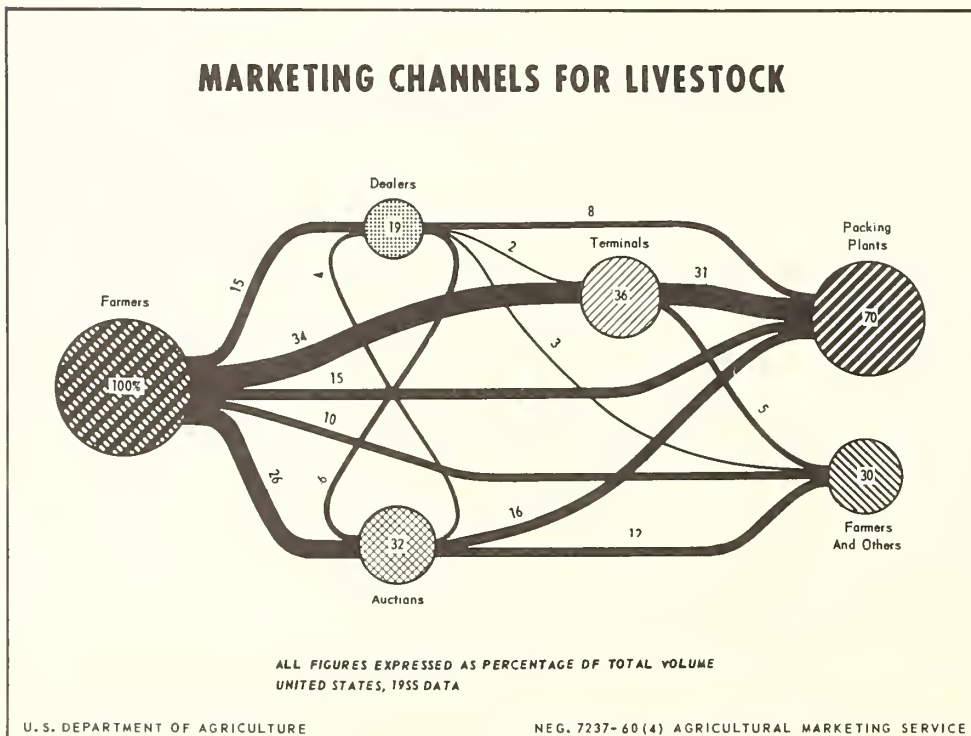


Figure 2

buyers. However, these disadvantages could be corrected for they are not a necessary part of direct selling.

Rising urban land values, reduced volume at some terminal markets, continued bunching of receipts near the first of the week, labor contracts calling for fixed weekly wages, and older facilities are creating serious problems of operating efficiency at some terminal markets. From the standpoint of the meatpacker, country buying in some instances increases and in others decreases his direct procurement costs. Country buying may also enable the packer to better regulate the flow of livestock to his plant and avoid costly "gluts" or shortages on certain days.

During the next few years, the number of livestock sold direct will probably continue to increase and the percentage sold at terminal stockyards will probably continue to decline. Auction markets will likely sell about the same percentage of livestock as they do now. At these markets, producers sell small lots of animals, often those that are culled from breeding herds. Many auctions conduct special sales of feeder livestock. The volume of fed cattle and lambs sold through auctions has been and probably will continue to be rather small.

Vertical integration is a subject of spirited discussion in the livestock industry. For years, food chains have been integrating the wholesaling and retailing of meat. A few retail food chains also own meatpacking plants and feed some cattle and lambs. Many meatpackers also feed cattle and lambs. The number fed doubled during the past 10 years. The number of cattle fed by packers as a percentage of all fed cattle marketings increased from 4.6 percent in 1955 to 6.5 percent in 1964. An increase in vertical integration reduces the proportion of livestock handled by marketing agencies since it eliminates one or more marketing transactions.

Futures trading in live animals is a recent innovation which has received much attention. Since there is virtually no delivery of livestock on futures contracts, futures trading has not altered directly the way in which livestock are sold. However, it is an important innovation in that it is a vehicle for establishing future prices for livestock and for transferring price risks.

Changes in basis of sale have also appeared. The number of livestock--particularly cattle--sold on a carcass grade-and-yield basis has been increasing. During 1961, about 13 percent of all cattle, 12 percent of all sheep and lambs, 6 percent of all calves, and 4 percent of all hogs sold direct to packers were sold on a grade-and-yield basis. Comparable national data for other years are not available. However, beginning on June 1, 1965, the Market News Service of USDA began reporting direct sales of slaughter cattle in interior Iowa and southern Minnesota. During the first 10 months of this report, direct sales of almost 2.5 million head were reported. On the average, 27 percent were sold on a grade-and-yield basis. In that reporting area, at least, the carcass-grade and dressed-weight basis is an important method of selling cattle.

Carcass grade-and-yield selling has an inherent marketing advantage. It is a more accurate way of determining value. For animals sold on a live basis, only an estimate is made of carcass quality and weight. Whereas actual carcass grades and weights are the basis of grade-and-yield selling. This may account for the increasing volume of some species of livestock sold on this basis.

In practice, however, grade-and-yield selling has had several shortcomings and inequities. In cattle sales cold-carcass weight, on which sale is based, is estimated by applying a "pencil shrink" to the hot-carcass weight. This "shrink" may vary from 1.5 to 3 percent among packing plants. Furthermore, the same "pencil shrink" is sometimes not used for all purchases by the same packing plant. This is not a problem in grade-and-yield selling of hogs since sale is based on hot-carcass weights.

Grade-and-yield prices are not directly comparable to live prices. This creates problems in comparing and evaluating markets. Many livestock producers are wary of grade-and-yield selling because it relies heavily on mutual trust in reporting carcass grades and weights accurately and honestly. In spite of the economic advantage of grade-and-yield marketing, it probably will not increase rapidly until there is more confidence in grading, weighing, and carcass identification at the packing plant.

New patterns of transportation are closely associated with changes in the livestock industry. Growth and development of the highway system and of truck transportation--particularly since World War II--has brought many changes in the livestock industry. What has happened in the transportation of cattle and calves demonstrates this change. Between 1948 and 1963, shipments of cattle by rail declined from 7 million tons to 2.1 million tons--a 70 percent drop. This trend is continuing. The primary impact of these changes has been to increase flexibility of marketing.

Changes in Livestock Production

Many of the changes in livestock marketing are closely related to changes in the livestock industry. These include changes in the quantity, in the quality, and in the location of production.

Cattle production.--Major changes in cattle production include: (1) A rather rapid and large increase in beef cattle production, (2) an expansion of the areas of production, and (3) developments in cattle feeding.

Between 1945 and 1965, cattle numbers increased 25 percent. The number of beef cattle increased more than 35 million head but dairy cattle numbers declined by 14 million head. Since 1946-49 the number of cattle and calves slaughtered annually has increased by 23 percent while total pounds of beef and veal has increased by 79 percent.

Production of beef cattle is widely dispersed and is becoming more dispersed every year. The beef-calf crop is used in this article as a measure of the geographic distribution of beef cow-calf production. ^{3/} In 1965, 6 Great Plains States ^{4/} produced 40 percent of the total; the 11 other Western States produced 22 percent. Eight of the North Central States ^{5/} produced 16 percent and 8 Southern States ^{6/} accounted for another 18 percent of the calf crop.

Beef production has increased in all States but New Mexico. By regions, the largest increase in actual numbers has taken place in the 6 Great Plains States. This region accounted for 38 percent of the increase in the national beef-calf crop, although its gain during the past 20 years was slightly less than the national average rate of growth.

Annual production of beef calves in the North Central States increased 150 percent between 1945 and 1965--about 7.5 percent per year. In the Western region, 69 percent more beef calves were produced in 1965 than in 1945; this was the lowest rate of growth of any area in the United States. In the 6 Southern States the annual beef-calf crop has increased by 154 percent in the past 20 years or 8 percent per year.

^{3/} The beef-calf crop was estimated by multiplying the number of cows and heifers 2 years old and older not kept for milk on hand January 1 in each State by the State calving percentage. This assumes that the calving percentage is the same for both dairy and beef.

^{4/} North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas.

^{5/} Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Ohio.

^{6/} Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, Tennessee, and Kentucky.

The East Central States 7/ --particularly Kentucky and Tennessee--have not been an important source of beef cattle, but their beef-calf crop increased from 465,000 in 1945 to 2.2 million in 1965, almost 20 percent per year. The Southern and East Central States combined produced almost as large a beef-calf crop in 1965 as did the 11 Western States.

Cattle feeding.--The number of cattle moving through feedlots before slaughter has been increasing--especially during the past 10 years. In 1955, 10.8 million cattle were fed--42 percent of total commercial cattle slaughter. By 1964, 17.3 million fed cattle were marketed, 56 percent of all commercial cattle slaughter. The number of cattle feeders is declining but those continuing in or entering the cattle feeding business have been feeding an increasing number of cattle. The number of feedlots with capacities of over 1,000 head has increased substantially every year.

Thus, livestock marketing has adjusted to changing location of cattle production, increased size of some producers, and increased quantities of grain-fed beef. In some cases, new methods of marketing may have induced these changes.

Hog production.--Hog production has grown at a slower rate than cattle production. Between 1950 and 1965, numbers of hogs produced for slaughter increased by approximately 19 percent. But growth was far from uniform among geographic regions. Greatest growth was in the South Atlantic States, where hog marketings increased 30 percent between 1950 and 1964. In some areas hog marketings declined: 44 percent in the South Central States, 21 percent on the West Coast, and 19 percent in the Mid-Atlantic States. Thus, there has been a shift in location of hog production, with increased concentration in some producing areas.

Hog production remains concentrated in the North Central States. In 1964, the West North Central States contributed 50 percent of the total hog production, and the East North Central States accounted for another 33 percent. The remaining hog production was spread widely. States in the Northeast had 1 percent, the Southeast 6 percent, the South 8 percent, and the Western States the remaining 2 percent.

Hog production remains chiefly in the hands of family farms that raise pigs, feed hogs, and produce the grain required for feed. Nevertheless, hog enterprises have become larger. Between 1949 and 1959, the proportion of hog farms farrowing 10 or more litters increased from 29 percent to 35 percent. Average number of hogs sold per hog farm increased 60 percent between 1954 and 1959. These size trends apparently have continued since 1959. Thus, as with most other farm enterprises, there has been an increase in size of hog-producing units and a decline in the number of units.

Some separation of feeder pig production from hog feeding has occurred in much the same way as feeder cattle production is separated from cattle feeding. This has occurred chiefly in the fringes of the Corn Belt. Some producers, chiefly in the northern and southern fringes of the Corn Belt, with surplus labor and short grain supplies have been specializing in feeder pig production. Other farmers, chiefly in the central Corn Belt, with ample feed grains and more fully utilized labor have specialized in hog feeding. This development has introduced another market transaction.

Sheep and lamb production.--The lamb crop, like the beef-calf crop, depicts the geographic location of sheep and lamb production. Sheep production is still widely dispersed throughout the country, but not so widespread as beef production. Almost half of the 1965 lamb crop was produced in the 11 Western States. Another 28 percent was produced in the 6 Great Plains States of which over half was in Texas. These 17 States produced almost three-fourths of the Nation's lamb crop. The 8 North Central States made up the only other important lamb production region. Their lamb crop amounted to 19 percent of the total.

7/ Virginia, North Carolina, South Carolina, West Virginia, Kentucky, and Tennessee.

Sheep numbers in the United States reached a high in 1942, when over 56 million head of sheep and lambs were on farms and ranches on January 1. Numbers then declined sharply for several years, until there were only about 30 million on hand on January 1, 1950. Sheep numbers increased slightly during the 1950s, but another, more gradual, decline started in 1960. By 1965, the number of sheep was less than half that in the 1930s and early 1940s.

Reductions occurred in both the western range production regions and in areas where farm flocks predominate. They were greatest in the 11 Western States, although their rate of decrease was the same as that for the whole country. Forty-six percent of the reduction in the lamb crop occurred in the Western States, which produced 46 percent of the 1965 lamb crop. The rate of decline was slightly lower in the Great Plains States and slightly higher in the North Central and East Central States.

Lamb and mutton production has not declined as much as sheep numbers because of increased feedlot finishing of lambs. Average weight of sheep and lambs slaughtered increased from 80 pounds in 1931-32 to 99 pounds in 1964.

Prospects

At present, no signs are evident of important changes in the current direction of livestock production trends. Beef has high consumer acceptance. This is not likely to change in the foreseeable future. The development of lower-priced vegetable protein substitutes for meat does not at present pose much of a threat to beef. Beef cattle production will continue to grow, with further expansion in the number of fed cattle. The trend to large feedlots will continue. Expansion of beef cow herds will continue in areas where recent growth has occurred. Hog production will also grow but much less rapidly than beef if recent trends in per capita use continues. Hog production will probably remain as a family farm enterprise, but production per farm will increase. It is not likely to be integrated in the manner of broiler production. Little sign of change is evident in the pattern of sheep production. Sheep will continue to be produced on the Western range in areas where they are more suitable than cow herds. Demand for both lamb and wool has declined because of increased production of close substitutes--synthetic fibers for wool, and beef and poultry for lamb. A declining number of sheep slaughterers in some areas may affect future sheep production.

Changes in Meatpacking

Changing characteristics of the meatpacking industry, insofar as they affect livestock marketing, fall into 2 broad areas: Shifting locational orientation of slaughter plants, and changing size structure of meatpacking firms.

Current reorientation in plant location has 2 dimensions. Relative shifts in plant capacity among regions is occurring as new slaughter plants which represent added slaughter capacity to the industry are being built in the areas of rapid growth in livestock production. There are also shifts in plant sites within regions, as new slaughter plants built to replace obsolete facilities are relocated away from old terminal market centers. Consequently, there is an increasing tendency for slaughter to take place nearer the point of livestock production. This reorientation in slaughter has often called for different ways of marketing livestock.

Shifts in slaughter among regions have been chiefly in response to shifts in production among regions. For a long time, meatpackers have located slaughter plants in the same general regions where livestock is produced. There are several reasons for this. They often found such locations desirable for insuring constant livestock supplies and for obtaining information about the supply side of the market. Furthermore, livestock shipped long distances are subject to shrinkage, injury, and death.

For these reasons, geographic regions with the greatest growth in livestock production also show the greatest increase in livestock slaughter and in the number of slaughter plants. Cattle production and feeding have grown most rapidly in the Southern, Southeastern, and Western States. These States also show the greatest growth in cattle slaughter. In like manner, hog production has grown most rapidly in the North Central and Southeastern States, and these States have shown the greatest growth in hog slaughter. In addition, changing transportation cost structures influence location as they altered profitability of plants in some regions relative to others.

Besides broad shifts in location of slaughter among regions, the location of plants within regions has shifted. When large, diversified, and integrated slaughter plants were built, many factors in addition to availability of livestock were important in the selection of a plant site. For example, it was necessary to be near terminal railheads for assembly of livestock and for meat distribution, to be near points where power could be economically supplied (first steam, then electricity), to be near ample labor supplies (in large cities), and to be near communication centers for flow of information.

In today's economy, these other factors in plant location have changed. Improved truck transportation and highways make it possible to assemble adequate livestock supplies at and ship meat from non-terminal points. More flexible power sources are available--adequate fuel and electricity are available almost everywhere. Labor requirements per unit of output have been reduced. Rapid communication of information is possible at any location. Hence, plants no longer need to be at the old terminal points. New plants generally are not being built there. As a result, non-terminal slaughter has increased. This orients the point of the livestock sale transactions toward the point of production instead of near centers of consumption. Furthermore, it minimizes the distance of shipment of live animals between point of production and point of slaughter.

A related change in functions of meatpacking plants also has an impact on location. An increasing number of plants are specializing in types of species slaughtered and in slaughtering or processing rather than slaughtering and processing.

Plant specialization in species slaughtered has gone hand in hand with reorientation in plant location, and increased regional specialization in livestock production. The location of plants at terminal markets favored multi-species operations because all livestock species were assembled at the plant gate on the market. As livestock-producing regions become more specialized, and as interior plants are built, the newer plants must ship in 1 or more species from other areas if they are to slaughter all livestock species. To avoid long-distance shipping and high transportation costs for some livestock species, slaughter plants in specialized livestock areas would be specialized, unless increased production costs offset procurement economies.

In the past, specialized interior plants usually had higher slaughter costs which offset procurement economies. But new technologies, such as on-the-rail dressing, mechanical knives, and more efficient refrigeration, have made relatively small specialized plants efficient. Furthermore, increased area specialization in livestock production has tended to broaden the specialized procurement area. It is now possible to take advantage of procurement savings by species specialization in a plant drawing livestock from a relatively small geographic area.

These factors have also facilitated separation of the slaughtering and meat processing functions. Because meat processing plants tend to be consumer market oriented, different market factors affect location decisions for slaughter plants and for processing plants. New technology, management, and meat merchandising have added further impetus to the location of new slaughter plants nearer areas of livestock production.

Changing size characteristics of firms in the slaughter industry also have an impact on livestock marketing. Data for the federally inspected sector of the industry show an increasing number of firms with decreasing variation in size. ^{8/} Concentration of slaughter in the hands of a few large firms has declined. In 1950, the 4 largest firms slaughtered 51 percent of the federally inspected production. By 1964, their share had dropped to 33 percent. This decline occurred because of a growing number of medium-sized firms. Slaughter by the 4 largest firms has shown only a slight increase, while their smaller rivals have increased in number and size, and are procuring the major share of the growing livestock production. An increase in number of commercial livestock buyers coupled with declining predominance of the largest firms, is often associated with enhanced competition for livestock. However, it doesn't guarantee greater competition in all geographic areas or for all livestock species. In some areas, there may actually be fewer buyers for livestock as a nearby plant becomes dominant, or as plants are moved to new locations.

Meat wholesaling.--Organization of the wholesale meat industry and structure of meat markets has an impact on livestock marketing insofar as it affects organization and behavior of the meatpacking industry. The wholesale meat trade has been buffeted by 2 trends: (1) Transfer of the bulk of retail meat sales into the hands of food chains which perform their own "wholesaling" functions by purchasing directly from meatpackers; (2) growth in the volume of meat going to hotels, restaurants, and institutions, which require different wholesaling services from those formerly required by the neighborhood butcher shops. The impact of the first trend is to reduce the number of independent wholesalers and packer branch houses. The impact of the second trend is to increase their number and change their function.

Bureau of the Census data from 1948 to 1963 show a growing number of establishments operated by meat wholesalers and brokers and a recent increase in number of packer branch houses following an earlier decline. At the same time, average volume of sales per wholesale establishment has increased. These data indicate that meatpackers are dealing with a slowly increasing number of wholesale buyers, whose average sales per establishment is growing.

The market faced by these wholesalers requires different meat handling services from the old retail market. Merchandising policies of retail chains place a higher priority on consistent quality than on quality levels. In the non-retail trade, great emphasis is placed on particular cuts of meat and parts of the livestock carcass. To the extent that the hotel, restaurant, and institutional market for meat has demand characteristics different from the retail market, the task of transferring consumers demand for meat into demand for livestock is compounded.

Prospective developments.--Many of the factors producing changes in meatpacking have not as yet run their course. As livestock production continues to expand in the "growth" areas, new slaughtering capacity will be built there. This will be associated with increased specialization in slaughter, unless radically new technology calls for re-integration of meat-packing operations within the plant. As old plants continue to be "depreciated out" and replaced, the critical factors in selection of plant sites probably will lead to choice of interior locations in most instances. Thus, the past pattern of locational reorientation in slaughter will likely continue.

If the recent changes in size structure of the meatpacking industry continue, there will be a further growth in the number of medium-size firms and a decline in concentration of slaughter by the largest firms. However, it is not at all clear that this trend will continue. If profitability of investment in meatpacking increases

^{8/} In 1964, FI slaughter accounted for 80 percent, or more, of all slaughter except calves. This percentage has been growing as more firms enter the national meat market.

relative to other industries in which large firms invest, it is likely that they could rather easily increase their share of slaughter--probably at the expense of smaller firms. Some of the new small firms are not bulwarks of financial strength. Unfavorable circumstances could push them to bankruptcy--to be absorbed by their larger competitors. Consequently, the trends in industry size structure could readily change.

Dairy Products 9/

The structure of the dairy industry has been changing ever since it began to be organized on a commercial basis a century ago. In the post war period, the process of change has accelerated in many respects.

Plant Numbers Declining

The ranks of fluid milk handlers have been thinning ever since the development of city milk distribution began over 75 years ago. Throughout this period, a major influence has been a shift in the scale curve--the relative costs of small firms as compared to large ones. ^{10/} In the early days, very little happened to fluid milk between the farmer and the consumer. Equipment used was simple and the costs of a small distributor were not greatly different from those of a large one. The introduction of the glass milk bottle before the turn of the century was one of the earliest developments causing some shift in the shape of the scale curve. Even simple bottle-filling equipment was expensive when used for a few quarts of milk a day and, as a result, many small distributors went out of business.

In the first 2 decades of the 20th Century, many cities adopted ordinances requiring the pasteurization of milk. These requirements increased the costs of small distributors compared with those of large ones, and many were no longer able to compete. In the 1920s and 1930s, the introduction of classified pricing plans providing for uniform prices to producers by all handlers, both large and small, forced many small handlers to pay the same prices as their larger competitors. Many found it impossible to do so and they too went out of business. In the late 1930s and 1940s, the introduction of the paper carton acted to raise the cost levels of smaller distributors. Since World War II, several technological and economic developments--no single one of them outstanding--have tilted the scale curve even further.

The number of fluid milk bottling plants (excluding producer-dealers) in the United States declined 53 percent between 1948 and January 1965. It declined at a slightly faster rate in 82 Federal order market areas (excluding New York-New Jersey). Between 1950 and 1964, the number of pool handlers in these markets declined 57 percent (fig. 3).

Most of the plants that went out of business were small. Some small plants increased their volume by installing new equipment or by fuller utilization of capacity. The following distribution of plants by annual volume shows that plants bottling less

^{9/} Prepared by Alden C. Manchester, agricultural economist.

^{10/} The economies of scale curve shows the relationship of costs to the size of operation. Research shows that processing costs are several times as high in very small plants as they are in fairly large plants. Delivery costs per unit also tend to decline as scale of operation increases, due to larger volume per stop on delivery routes and shorter distances between stops.

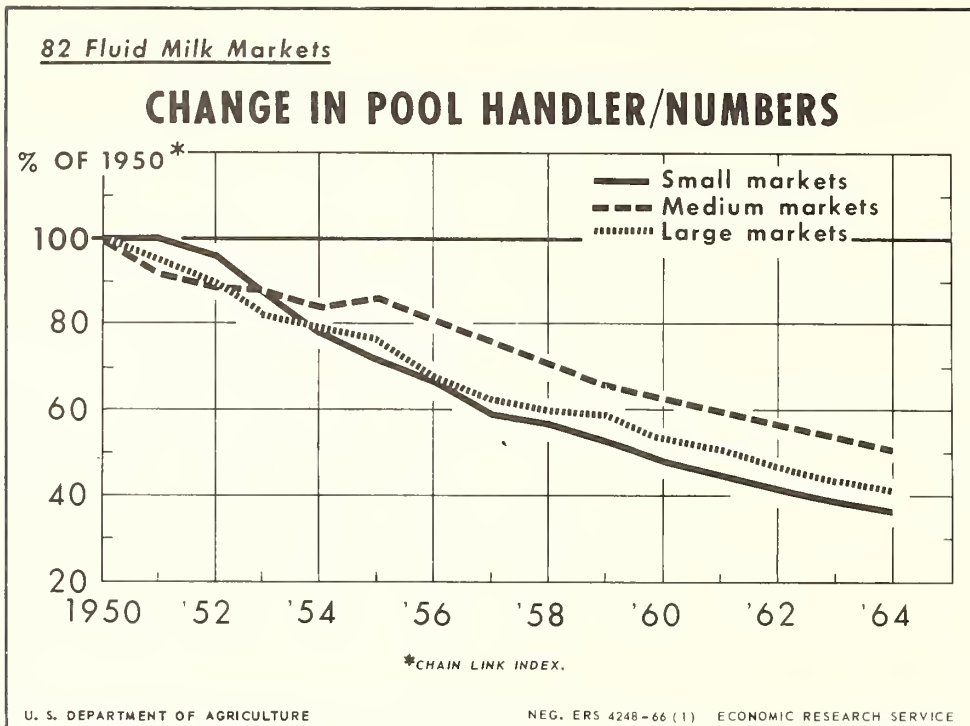


Figure 3

than 5 million quarts of milk a year declined from 93 percent of the total in 1950 to 64 percent in 1964:

Annual volume per plant	1950	1964
Million quarts	Percent	Percent
Under 1	72	28
1-4.9	21	36
5-9.9	4	13
10 or more	3	23
Total	100	100

The number of plants manufacturing dairy products has fallen somewhat less rapidly than fluid milk plants. Between 1944 and 1961, this type declined 37 percent. (These are the only years for which data on the total number of plants manufacturing dairy products are available.) Between 1944 and 1964, the number of plants making butter, cheese, evaporated milk, and ice cream declined more than half. Plants producing creamed cottage cheese and nonfat dry milk declined somewhat less as production of these products increased more rapidly than many others.

The number of large plants manufacturing dairy products has increased, and small plants have been disappearing. In 1944, 122 plants produced at least 2 million pounds of butter per year. In 1963, 219 plants were in this size category. During this period, the number of smaller plants declined from about 3,900 to about 1,100. The smaller plants accounted for 74 percent of the butter output in 1944 and 38 percent in 1961.

Changes in American cheese plants generally were similar. In 1944, 155 plants were producing 1 million pounds of cheese or more per year. By 1963, there were 431 such large plants. At the same time, the number of small plants declined from about 2,000 to 600. The small plants accounted for 70 percent of the production in 1944 and 38 percent in 1961.

Technological developments--especially new types of equipment and processes and more efficient equipment--were primarily responsible for the decline in the number of small dairy manufacturing plants and the increase in large-scale plants.

Concentration

Eight large dairy companies play an important role in the market for all types of dairy products. Several of them date back into the 19th Century but the major growth of all occurred since the turn of the century and all but one since the mid-1920s. Much of their growth--like that of other industrial firms throughout the economy--occurred during 2 of the 3 merger movements in the United States.

The first wave of mergers around the turn of the century did not include significant activities in the dairy industry. The second merger movement--during the latter half of the 1920s--saw one dairy company with sales of over \$100 million in 1919 more than double in sales volume, primarily because of mergers within the dairy industry. Another company was organized in 1923 and immediately began a period of rapid growth, primarily through mergers. By 1930, it had become the largest company in the dairy industry.

The 1950s brought the third major merger movement in the American economy. As in many other industries, several companies in the dairy industry grew very rapidly, primarily by merger with other firms in the industry. By 1956, each of the 8 national dairy companies had sales of over \$100 million, although not entirely of dairy products.

In 1934, the 3 largest dairy companies made 22.8 percent of the sales of packaged fluid milk and cream made by all commercial handlers (excluding producer-dealers). By 1950, their share had declined to 16.4 percent. Between 1950 and 1957, the share of these 3 companies increased modestly from 16.4 to 18.8 percent. During the same period, the share of the fourth to eighth largest companies increased from 4.3 percent to 8.3 percent. This reflects the rapid growth through mergers of companies of minor importance at the beginning of the decade. No later figures are available on the market share of these large companies on a national basis.

Horizontal acquisitions made by dairy companies have slowed substantially since 1957, due primarily to the Federal Trade Commission's challenge to the acquisitions of a number of the large companies under Section 7 of the Clayton Act. In some of these cases, settlements have been reached in which the companies have agreed to divest themselves of some of the acquired companies and to limit further acquisitions in the dairy industry. Therefore, it appears likely that, when these divestitures have been completed, the share of the 4 largest and also the 8 largest companies in the national fluid milk market will be near the 1957 levels or somewhat lower.

The large dairy companies have diversified increasingly over the years, entering a wider and wider variety of product lines. For 5 large dairy firms, sales of non-dairy products increased from 11.9 percent of total sales in 1940 to 18.9 percent in 1950 and 29.2 percent in 1960. ^{11/} Between 1961 and 1964, one company increased its

^{11/} Bartlett, R. W. An Analysis of Specific Comparisons and Conclusions in House Report No. 2231 on "Small Business Problems in the Dairy Industry," Ill. Agr. Expt. Sta., Res. Rpt. AERR-46, 7 pp. September 1961, p. 1.

sales of nondairy items from 5 percent to 40 percent of total sales. ^{12/} Some large companies--prevented from expanding their activities in the dairy industry--now are seeking and completing mergers which take them into many new lines both within and outside the food industry.

Concentration in the manufactured dairy products industries has increased little at the manufacturing level in the past 30 years. Between 1947 and 1958, concentration of production--measured by the market share of the 4 largest and 8 largest companies--declined in the butter industry, changed only slightly in concentrated and dried milk products and frozen desserts, and increased in the natural cheese industry.

In local fluid milk markets, the market share of the 4 largest handlers changed very little in middle-sized and large markets between 1950 and 1964 and increased sharply in small markets (fig. 4).

Distribution--Wider Variety of Outlets

The distribution system for fluid milk, which 40 years ago was based largely on home delivery, has changed to a wide variety of outlets including supermarkets, specialized dairy stores, convenience food stores, vending machines, gasoline stations, and drive-in dairies. The proportion of fluid milk sold on home delivery routes has declined from probably 80 to 85 percent of the total 40 years ago to 25 to 35 percent of the total today.

For a group of 80 fluid milk firms, home-delivery declined from 37 percent of the milk sold in 1954 to 29 percent in 1964. Wholesale deliveries increased from 48 percent in 1954 to 60 percent in 1964, and platform sales (to sub-dealers and some large retailers) declined from 11 to 9 percent.

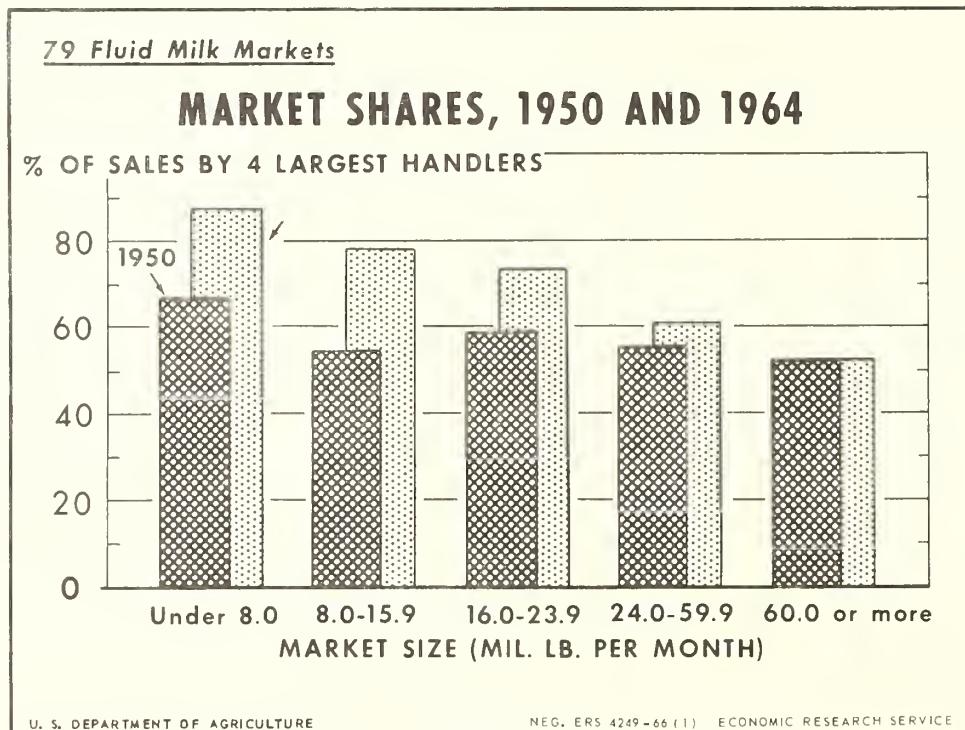


Figure 4

^{12/} Dun and Bradstreet, Dun's Review and Modern Industry, March 1965, p. 92.

Specialized distribution firms (sub-dealers or vendors) are becoming increasingly important in the distribution of fluid milk. There are about 3,900 fluid milk bottling plants in the United States and at least twice that many sub-dealers. Many of these operate only 1 or 2 delivery routes to households, but others are substantial firms with large businesses. In many cases, firms closing their bottling plants have become sub-dealers for other fluid milk plants. In some cases, a number of small distributors have joined together to establish a jointly owned bottling plant while they maintained their separate identities as distribution firms.

The growth of supermarkets has also markedly affected the merchandising of ice cream. Thirty years ago drug stores sold most of the ice cream. After the introduction of the supermarket and the half-gallon container, retail sales of ice cream rapidly shifted to supermarkets. In recent years, specialty ice cream stores have entered the picture, most of them selling relatively high-priced ice cream to consumers who prefer ice cream of a higher butterfat content or different texture than that commonly sold in supermarkets.

Sub-dealers are increasingly important in ice cream distribution, although not to the extent found in fluid milk distribution. Large ice cream manufacturers, like fluid milk distributors, are consolidating their manufacturing operations in fewer and fewer locations and establishing distribution depots from which deliveries are made. Often the ice cream plants which are closed become distribution depots.

The retail cheese market today is drastically different from that of 30 years ago. Development of new types of cheeses and new processing and packaging methods led to the present supermarket cheese departments with 50 to 100 or more varieties, types and packages, in place of the handful of varieties from which the grocer cut a chunk. Natural cheese from several countries and a seemingly endless variety of processed cheeses, cheese foods and spreads are available--all prepackaged and many of them sliced.

The principal changes in butter marketing include the nearly universal packaging in one form or another and the virtual disappearance of the old butter tub, the increased proportion of Grade A and AA butter, the more widespread use of consumer grades for butter as a merchandising tool and the increase in private labels.

In the postwar period, nonfat dry milk became a consumer product of some importance when the instantized product was introduced. It is sold under private labels by many retail groups and under a small number of packer labels of a few major companies.

The Next Decade

Where might some of these developments be expected to lead during the next decade? First, economies of scale will continue to favor large firms, and the number of firms will continue to decline. This does not mean that the largest firms will increase their share in many individual markets. Primarily, it will be a matter of more nearly equalizing the power of large and middle-size firms.

Secondly, shifts of major importance in the functions performed by different types of firms in the marketing system for fluid milk can be expected. By 1975, most fluid milk processors will have transferred the entire supply function to producer cooperatives, including management and disposal of surplus fluid-grade milk. Many manufacturing plants will supply cultured and concentrated products to fluid milk distributors.

Similarly, many processors will rid themselves of the route distribution function, transferring route operations to others--sub-dealers or vendors--or selling at the

platform to retail organizations. Perhaps a third to a half of the milk they sell will be marketed under the private labels of chain stores, retail groups, or vendors.

As processors become more specialized in the processing function, individual plants will grow in size and distribute over wider and wider areas. Distribution areas of 300 to 500 miles from the fluid milk plant will not be uncommon 10 years from now.

Further technological developments are likely to reduce labor requirements in processing, particularly in cheese production, which now takes place in relatively small plants compared to plants manufacturing other dairy products.

Poultry and Eggs 13/

In recent years, changes in the poultry and egg marketing industries have been occurring at an accelerated pace. As in most other agricultural marketing industries, there has been a trend toward fewer and larger firms.

Egg Assemblers, Packers, and Processors

A comprehensive national survey made in 1958 showed that the East and the West North Central regions had the largest numbers of egg assembly plants. These regions also had a larger proportion of the handlers in the United States than they had of the U.S. egg production. The reverse was true for the New England, Middle Atlantic, South Atlantic, and Pacific Coast States. A comparison of 689 egg assemblers reporting for the Commercial Egg Movement Report in 1965 with 795 in 1963 suggests larger plants are handling an increasing share of the volume (table 5). Average volumes per plant were somewhat smaller in the East and West North Central regions than in other important egg production areas.

Although the exact number of plants producing liquid, frozen, and dried eggs in various forms is not known, an indication of trends in their number and location may be obtained from the listing of plants authorized to operate under USDA egg inspection and grading programs. Number of plants producing frozen eggs declined from 1960 and 1965. More than three-fifths of these plants were in the Midwest in 1965. However, that region lost nearly one-third of its plants between 1960 and 1965, while numbers tripled in the South. The number of plants producing dried eggs under Federal inspection increased from 16 in 1960 to 21 in 1965. The largest number was in the Midwest. The largest increase from 1960 to 1965 also occurred in that region.

Poultry Processors

Plants slaughtering and eviscerating poultry under Federal inspection process about 87 percent of the poultry sold off farms. While output has been increasing, the number of plants has been declining (table 6). From 1962 to 1964, the number of plants fell almost 10 percent, although output increased 11 percent. Average slaughter for all plants under Federal inspection increased from 15 million pounds per plant in 1962 to 18.5 million pounds in 1964. Plants slaughtering 30 million pounds or more annually accounted for 48 percent of the slaughter in 1962 and 57 percent in 1964. The largest increases occurred in the South Atlantic and South Central regions. These regions lead in broiler production. Plants slaughtering young chickens tend to have a larger annual output than those slaughtering other kinds of poultry, mainly because of their year-round operation.

^{13/} Prepared by Fred L. Faber and Frank M. Conley, agricultural economists.

Table 5 .--Sample of egg assembly plants: Distribution of number and volume handled, by size groups, 1965 and 1963 1/

Average volume assembled per week	Plant numbers		Volume handled	
	1965	1963	1965	1963
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Cases (30 dozen)				
Under 400	19.7	18.0	2.2	2.7
400-699	20.5	20.5	5.6	6.3
700-999	12.3	13.6	5.4	6.4
1,000-3,999	36.6	39.1	39.1	43.3
4,000 or more	10.9	8.8	47.7	41.3
	<u>Number</u>	<u>Number</u>		
Total number of plants ..	689	795		
			<u>Cases</u>	<u>Cases</u>
Total weekly volume			1,325,100	1,383,646

1/ Firms reporting to USDA Market News Service in connection with Commercial Egg Movement Report. Five-week average, mostly mid-April to mid-May 1963, and 5-week average, mostly March to early April 1965.

Table 6 .--Distribution of poultry slaughtered in plants under Federal inspection and volume slaughtered, by size groups, 1964 and 1962

Annual volume slaughtered	Plant numbers		Volume slaughtered	
	1964	1962	1964	1962
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1,000 pounds (live weight):				
Under 1,000	15.1	16.4	0.1	0.2
1,000-4,999	15.5	18.6	2.2	3.4
5,000-9,999	11.5	16.4	4.9	8.4
10,000-29,000	35.7	32.8	36.0	40.0
30,000 or more	22.2	15.8	56.8	48.0
	<u>Number</u>	<u>Number</u>		
Total number of plants ..	482	532		
			<u>Million pounds</u>	<u>Million pounds</u>
Total volume slaughtered (live weight)			8,944	8,055

The number of further-processing plants under USDA poultry inspection and grading programs increased from 295 in 1960 to 452 in 1965. ^{14/} More than three-fourths of the further-processing plants do not slaughter and eviscerate. In 1964, plants using less than 100,000 pounds of ready-to-cook poultry each accounted for 49 percent of the plants and 1 percent of the volume of ready-to-cook poultry used. Plants using more than 5 million pounds each in 1964 accounted for 8 percent of the plants and 70 percent of the volume (table 7). One-fourth of the plants were located in the North Atlantic Region, but they used only 13 percent of the volume. Plants in the West North Central Region were only 16 percent of the total number, but they accounted for 33 percent of the volume of poultry used. Thus, the Midwest has more of the large plants, while there are more small plants in the other regions, particularly in the North Atlantic Region.

Poultry Wholesalers

Numbers of establishments wholesaling poultry and poultry products have been declining in recent years, but the dollar volume of sales for those remaining has been increasing. The same trends are apparent for agents and brokers. Wholesaling and jobbing firms in large cities have been increasingly by-passed as more direct movement from egg packers and poultry processors to retailers has expanded. The high cost of doing business in older city markets has been a contributing cause. Moreover, country plants are better able now to meet buyer specifications for the kinds, quantities, and qualities of egg and poultry products required than in earlier years.

Table 7 --Distribution of numbers of plants and volume of poultry used in further-processing, by size groups, 1964

Poultry used in further-processing	Plants		Poultry used in further-processing	
	Number	Percent	Million pounds	Percent
1,000 pounds (ready-to-cook weight):				
Less than 100	218	49.1	5.8	0.9
100-499	88	19.8	19.6	3.1
500-999	41	9.2	29.6	4.7
1,000-4,999	61	13.8	132.4	21.0
5,000 or more	36	8.1	444.2	70.3
Total	444	100.0	631.6	100.0

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

^{14/} Further-processors start with ready-to-cook birds, then cook and usually debone the meat and prepare a very large variety of canned, frozen, and dried products. Information on plant numbers was compiled from December 1960 and March 1965 issues of List of Plants Operating Under USDA Poultry and Egg Inspection and Grading Programs, Consumer and Marketing Service, USDA.

Reasons for Declining Numbers of Firms and Plants

The existence of substantial economies of scale in most processing and marketing functions is the principal reason why numbers of egg and poultry plants are declining. Economies of scale provide the major impetus toward reduced numbers of egg packing and breaking, and poultry slaughtering and eviscerating plants. In further-processing, economies of scale exist but the tendency of this force to reduce plant numbers is currently overshadowed by the rapid increase in output of further-processed products.

Increasing density of production has also been a factor tending to reduce numbers of assemblers and processors. As production density increases around local plants, the costs of assembly are reduced. Combined assembly and processing costs are then minimized by employing fewer and larger plants.

The achievement of technological feasibility in consumer grading and cartoning of eggs at country points has caused this function to move rapidly from city to country points. For all practical purposes, this migration was completed for poultry processing some years earlier. Because of reduced assembly costs, larger plant sizes then became more feasible at country points.

The increasing coordination of input-supplying, producing, and marketing functions under common management has also tended to reduce firm and plant numbers. Under such arrangements more effective use can be made of managerial resources. Moreover, development of steady and regular outlets for chicks and feed facilitates achievements of economies of scale and better utilization of capacity in hatchery and feed operations.

Another factor which tends to reduce numbers of firms is the development of more direct marketing channels. Both direct buying at country points by retailers and direct delivery to retailers' warehouses or stores by firms from outside the immediate area result in the elimination of functions previously performed by local wholesale firms.

Future Trends

A continuation of current trends is indicated for the future. As a result of an even higher degree of coordination of production and marketing functions, there is likely to be increased price stability, the production of standardized products for specific markets, a further lowering of costs, and growing importance of multi-plant and multi-function firms.

Realization of economies of scale and better utilization of plant capacity will further reduce processing costs and result in larger sized units and fewer plants than at present. Production density will be increased so that assembly costs will also be reduced.

Gradual growth is indicated for further-processed poultry and egg products. These may be produced to a greater extent than now in new departments of poultry slaughtering and shell egg packing plants. However, because of the importance of distributing costs, many separate and market-oriented plants will continue to produce these items.

Grains Used for Food 15/

Many of the industries involved in marketing grain for domestic food uses are also involved in merchandising and processing grains for feed and industrial uses. Some of these industries also export grain and grain products. Thus, changes in the structure of some of the food grain industries are influenced by total grain production and marketing--both for domestic and foreign uses.

From 1947 to 1963, the total number of establishments specializing in the marketing of grains for human consumption decreased sharply. Most of this reduction in number occurred in 2 industries--flour milling and baking.

These changes were closely associated with changes in domestic consumption habits. Per capita consumption of rice and wet-corn processed products increased considerably from 1947 to 1963. Per capita consumption of rye, barley, and dry-corn products declined during the period. Per capita consumption of wheat products decreased from 1947 to 1962 but has since shown some tendency to level off.

Between 1947 and 1954, decreases in per capita consumption were about offset by increases in population growth. In more recent years per capita consumption remained about steady, and total consumption increased at about the same rate as population.

Grain Elevators

The number of country elevators decreased sharply from 1947 to 1954 but increased from 1954 to 1963 (table 8). The number of terminal elevators increased 50 percent from 1954 to 1958 but decreased slightly between the latter year and 1963. The growth in elevator numbers was related more to the production of grains than to the domestic consumption of food grains. It took place during the period of increasing grain stocks. Many subterminal elevators were built during this period.

Table 8.--Grain elevators and establishments manufacturing flour and meal:
Number and type, 1963, 1958, 1954, and 1947

Type	1963	1958	1954	1947
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Elevators:				
Country	7,653	7,000	6,580	<u>1</u> /8,161
Terminal	633	690	460	---
Flour and meal:				
Wheat flour	306	346	371	---
Corn meal	95	147	127	---
Prepared flour mixes ..	33	81	58	---
Products n.e.c.	184	240	247	---

1/ Number for 1948.

Compiled from Census of Business--Wholesale Trade and Census of Manufactures.

15/ Prepared by Walter G. Heid, Jr., agricultural economist.

During this period the utilization of grain storage capacity decreased sharply as well as profit rates of many elevators.

Food Grain Processing Establishments

The number of plants producing flour and meal decreased by nearly 50 percent from 1947 to 1963 (table 9). Decreases were reported in all sectors of the industry (table 8). Most, but not all, of the establishments and companies that left this industry were small. With some growth reported by medium-sized flour milling companies and the closing of a few large mills, concentration in the industry, nationally, was less in 1963 than in 1947.

Output increased at a slower rate in the flour and meal industry than in most food grain industries (table 10). This rate of growth was associated with the continued decline in per capita consumption of wheat flour through 1962 and a leveling off in more recent years. Nevertheless, in recent years the utilization of flour milling capacity increased considerably, reaching about 93 percent in 1963.

The cereal preparations, rice milling, and wet-corn processing industries also had fewer establishment numbers in 1963 than in 1947 (table 9). However, each of these industries showed increases in establishment numbers from 1958 to 1963. These increases were associated with increases in per capita consumption of these products.

Establishments in the blended and prepared flour industry showed a substantial increase from 1958 to 1963, even without considering those gains resulting from changes in industry specification for the 1963 census.

Bakery Products, Macaroni and Spaghetti

Both establishment and company numbers declined sharply in the bread and related products industry from 1947 to 1963. All of the reduction in establishments occurred in the group employing fewer than 100 employees. All types of establishments declined in number from 1958 to 1963 except multi-unit bakeries (table 11). Grocery chain and home service bakeries declined after increasing in the period 1954-58. The number of retail bakeries also declined.

In the biscuit and cracker industry, both the number of establishments and companies increased from 1958 to 1963. In the macaroni and spaghetti industry, the number fluctuated from 1 census year to another.

Outlook

In recent years, the U.S. per capita consumption of grain products has about leveled off and total consumption has increased. Structural changes in the food grain industries from 1947 to 1958 resulted in fewer but larger establishments and companies. Since 1958, the number of establishments and companies in the milling and baking industries has continued to decline. In most of the other grain product industries, the number of establishments has increased slightly since 1958, and in some the number of companies has increased. In general, the changes from 1947 to 1963 resulted in increased output per establishment.

As many of the food grain industries grow in number of establishments as well as in average size, these industries may be expected to become more competitive. These adjustments should, in the long run, result in greater efficiencies in the food grain industries.

Table 9.--Food manufacturing industries: Number of companies and establishments, 1963, 1958, 1954, and 1947 ^{1/}

Industry	Companies				Establishments			
	1963	1958	1954	1947	1963	1958	1954	1947
	No.	No.	No.	No.	No.	No.	No.	No.
Grain mill products:								
Flour and meal	510	703	692	1,047	618	814	803	1,243
Cereal preparations	35	33	37	55	48	43	46	64
Rice milling	62	61	65	75	74	72	80	88
Blended and prepared flour ^{2/} ...	140	112	123	115	165	117	131	123
Wet corn milling	49	53	54	47	60	59	58	55
Bakery products:								
Bread and related products ^{3/} ...	4,339	5,304	5,470	5,985	5,010	6,026	6,103	6,796
Biscuits and crackers	286	285	---	---	356	339	311	326
Macaroni and spaghetti	207	205	226	219	221	214	233	226
Canning, preserving, and freezing:								
Canned fruits and vegetables	1,135	1,315	1,461	---	1,430	1,630	1,758	2,265
Dehydrated fruits and vegetables :	126	130	119	120	176	161	148	146
Pickles and sauces ^{4/}	541	566	642	637	588	619	717	742
Frozen fruits and vegetables	566	347	215	---	650	426	266	291
Canned specialties ^{5/}	154	93	---	---	173	107	---	---
Fats and oils:								
Cottonseed oil mills	115	125	145	172	188	214	286	315
Soybean oil mills	68	82	55	105	101	117	88	133
Shortening and cooking oils ^{6/} ..	65	62	---	---	112	105	135	127

^{1/} For some industries data for 1963 and 1958 are not strictly comparable with those for 1954 and 1947. Because of changes in industry definitions used for the 1958 and 1963 censuses, some industries include plants previously excluded and some industries exclude plants previously included. The tabulation below shows 1958 data for establishments classified according to the industrial classification system used for the 1954 census; data are shown only for those industries for which changes in industry definitions caused significant differences:

Industry	Establishments
Biscuits and crackers	304
Canned fruits and vegetables	1,675
Pickles and sauces	705
Frozen fruits and vegetables	303

Totals for 1963 and 1958 include Alaska and Hawaii except where inclusion would result in a disclosure.

^{2/} The blended and prepared flour industry includes flour mixes such as cake, biscuit, doughnut and pancake mixes and, for the 1963 census, refrigerated doughs. Thus, data for 1963 are not strictly comparable with those for the previous years. Establishments in 1963 classified according to 1958 definitions numbered 144.

^{3/} A review of the 1958 data by the Bureau of the Census indicated that 846 small, single-shop retail bakeries were incorrectly included as wholesale bakeries in the 1958 census. The 1954 census is subject to a similar error.

^{4/} Includes plants manufacturing pickled fruits and vegetables, vegetable sauces and seasonings, and salad dressings.

^{5/} Includes baby foods, soups (except seafood soups), "native foods," health foods, and other canned specialties.

^{6/} Includes data for margarine.

Compiled from Census of Manufactures, 1963, 1958, 1954, and 1947.

Table 10.--Indexes of production of primary products shipped by producers,
1963, 1958, and 1954
(1954=100)

Product	Production		
	1963	1958	1954
Grain mill products:			
Flour mill products	128	111	100
Wheat flour, except flour mixes	122	108	100
Corn meal (for human and animal use)	149	130	100
Grain mill products, n.e.c.	178	109	100
Cereal breakfast foods	148	114	100
Milled rice and byproducts	158	104	100
Blended and prepared flour	152	117	100
Wet corn milling (including starch)	133	115	100
Bakery products:			
Bread and related products ..	114	109	100
Biscuits, crackers, and cookies	132	114	100
Macaroni and spaghetti	126	110	100
Canned and frozen foods:			
Canned fruits and vegetables, preserves, jams and jellies	139	120	100
Pickled fruits and vegetables, sauces, and salad dressing	145	116	100
Frozen fruits, juices, vegetables, and specialties ...	252	162	100
Fats and oils:			
Cottonseed oil mills	96	79	100
Soybean oil mills	204	156	100
Shortening and cooking oils ..	135	110	100

Compiled from the Census of Manufactures, 1963.

Table 11.--Establishments baking bread and related products: Number and type, 1963, 1958, 1954, and 1947

Types	1963	1958	1954	1947
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Manufacturing bakeries:				
Wholesale	4,287	5,240	5,426	---
Grocery chain	153	178	142	---
Home service	281	361	217	---
Multi-unit	289	247	318	---
Total	5,010	6,026	6,103	6,796
Retail bakeries <u>1</u> /.....	18,631	19,235	19,304	<u>2</u> /19,500

1/ Includes establishments primarily selling bakery products over the counter. Manufacturing retail bakeries bake some or all of the products they sell; nonmanufacturing retail bakeries do not bake any of the products they sell.

2/ Number for 1948.

Compiled from Census of Manufactures and Census of Business--Retail Trade.

Fruits and Vegetables 16/

Processing

Changes in the fruit and vegetable processing industries have been very dynamic during the past 2 decades. The number of establishments canning fruits and vegetables in the United States has declined more than a third and those packing pickles and sauces have declined about a fifth. In contrast, the number of establishments in the frozen fruit and vegetable industry has more than doubled. The number of establishments dehydrating fruits and vegetables has risen 21 percent. The number of companies in these industries also changed in about the same proportion as the number of establishments (table 9).

Output of the canned fruit and vegetable industry increased by 39 percent from 1954 to 1963 (table 10). The production of pickled fruits and vegetables, sauces and salad dressings increased by 45 percent during this time. The largest relative increase was for the frozen fruit and vegetable and specialty products. Output of these products in 1963 was 152 percent above the 1954 level.

The change to fewer but larger firms in the fruit and vegetable canning industry is the same type of structural change that is taking place throughout most agricultural production and marketing industries. Almost all of the decrease in canning establishments has been in the relatively small firms--those employing fewer than 100 employees.

The larger firms sell a higher proportion of their pack under packer brands than under customer brands. 17/ In contrast, the smaller firms sell a higher proportion of their pack under customer brands.

16/ Prepared by Loyd C. Martin, agricultural economist.

17/ Economic Inquiry into Food Marketing, Federal Trade Commission, June 1965.

According to a Federal Trade Commission study, the 4 largest processors of 4 canned fruits accounted for more than half the total production of these products in 1959. For canned vegetables, the 4 largest producers accounted for over one-half of the total production of sweet corn, green peas, and tomato catsup. The 4 largest producers of canned juices accounted for about 90 percent of the packs of grape juice and prune juice and about one-half of the output of tomato juice and orange juice. These leading producers likely have increased their share of the market for canned fruits and vegetables since 1959.

Processed products continue to make up an increasing part of fruit and vegetable consumption. Most of the increase in use of processed products is at the expense of fresh fruits and vegetables. Increases in consumption of processed fruits and vegetables are expected to continue--especially for frozen and specialty products. This shift will be affected to some extent by changes in the relative prices of processed and fresh fruits and vegetables. Increases in the number of employed homemakers--coupled with increasing disposable income--are factors associated with the increase in fruits and vegetables consumed in the processed form. The high demand for convenience and prepared foods and the development of new and improved products also are important factors. New technologies such as frozen concentrate, dehydro-freezing and freeze drying, together with foammat and vacuum-puff methods of drying, show promise for stimulating the consumption of processed fruits and vegetables.

In the future, food processors are expected to continue diversifying their operations. Diversification would utilize the new technologies. There will be a continuation of the trend to fewer and larger firms in the fruit and vegetable processing industry. Several important factors pressing toward larger firms in the fruit and vegetable processing industry are the large investment required for plant and equipment, for operating capital, for adopting new technology, and for the development of new and improved products, and also the shortages of experienced management and plant labor.

Wholesaling

Assemblers.--The number of establishments assembling fresh fruits and vegetables in production areas has changed very little since 1948 (table 12). However, their total sales have increased about 38 percent and sales per establishment also increased.

Wholesalers.--The number of establishments operated by merchant wholesalers of fresh fruits and vegetables has declined by more than 16 percent since 1948 (table 12). This decline has been accompanied by a decrease of about 6 percent in their total sales. During this same time, establishments of agents and brokers selling fresh fruits and vegetables increased by about 35 percent in number and by over 60 percent in total sales.

According to Manchester's study, approximately 5,100 wholesalers left the produce business from 1939 to 1958. ^{18/} During this same time, 3,700 firms entered the business. This survey also found that the largest increases in sales were reported by wholesale firms which were providing specialized services to their customers, such as prepackaging and tomato ripening and repacking. These successful wholesalers also found that more and more of their sales volume was coming from supplying specialized demands of retail organizations and institutional outlets rather than from sales of fruits and vegetables as prepared for market in the production area. Many traditional merchant wholesalers of fruits and vegetables for fresh market were by-passed in the increased direct purchasing by large food chains and affiliated wholesalers. Another change in wholesaling fruits and vegetables has been the decline in auction selling.

^{18/} The Structure of Wholesale Produce Markets, Alden C. Manchester, Agricultural Economic Report No. 45, USDA, April 1964.

Table 12.--Fresh fruits and vegetables wholesalers: Number of establishments, total sales, and average sales per establishment, 1963, 1958, 1954, and 1948

Year	Merchant wholesalers	Agents, brokers	Assemblers of farm products
	<u>No.</u>	<u>No.</u>	<u>No.</u>
Establishments:			
1963	5,123	1,085	2,106
1958	6,291	986	2,277
1954	6,520	893	1,993
1948	6,127	805	2,032
	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Mil. dol.</u>
Sales:			
1963	2,981	2,088	1,505
1958	3,092	1,877	1,453
1954	3,262	1,591	1,288
1948	3,170	1,295	1,087
	<u>Thou. dol.</u>	<u>Thou. dol.</u>	<u>Thou. dol.</u>
Average sales per establishment:			
1963	582	1,924	715
1958	491	1,904	638
1954	500	1,782	646
1948	517	1,609	535

Compiled from Census of Business--Wholesale Trade.

Terminal auction companies now operate 6 auctions in 6 cities compared with 20 auctions in 14 cities in 1931. The volume of citrus and Western deciduous fruits handled by auctions in the markets where they are located has declined about 50 percent during this period. In 1962-63, auctions sold about 45 percent of the citrus fruit and 38 percent of the Western deciduous fruit received in the markets where they are located. Auctions are becoming more important as specialty distributors rather than as mass distributors of fresh fruits and vegetables. Again, direct purchasing by large retailers has been a factor affecting auction sales.

Direct purchasing by retail food chains and warehouses affiliated with retail groups from shipping point sources increased from 12 percent of receipts in major wholesale markets in 1936 to 26 percent in 1958. Some further modest increases can be anticipated as more chains become large enough to buy direct from shipping points and more affiliated wholesalers add produce to their merchandise lines. Wholesalers located in the terminal market areas will sell mainly to 3 groups of buyers of fresh fruits and vegetables. These groups are: (1) The specialized wholesalers supplying outlets such as restaurants, hotels and institutional buyers, most of which have demands not suited for supplying directly from shipping points; (2) unaffiliated independent retail grocery stores; and (3) large retailers who buy fill-in supplies when their estimates of needed supplies have been short and also certain specialty items and prepackaged items.

The relocation of wholesale produce markets in some cities from their downtown locations to modern food distribution centers will assist wholesalers to strengthen their role in the marketing of fresh fruits and vegetables.

Oilseeds and Vegetable Oils 19/

Marketing of oilseeds and vegetables oils has been influenced by many of the forces for change that have affected the marketing of other farm products over the past 2 decades. Changes in these industries have been affected by large increases in production and by the shift of the United States from a net importer to a net exporter. The industry has undergone changes in organization and structure in processing methods and techniques; and in the size, type, and number of mills processing the various oilseeds. Changes have occurred in the utilization of these oils in domestic and foreign outlets, particularly, following World War II.

Although total per capita consumption of fats and oils has changed only slightly, per capita use of vegetable oils in margarine, shortening, and cooking and salad oils about doubled from the mid-1940s to the mid-1960s. These tendencies are expected to continue during the next few years.

Soybean oil and cottonseed oil are the 2 major vegetable oils produced in the United States, accounting for about 90 percent of total production. Both are used primarily in the production of edible commodities. Until the early 1950s, cottonseed was the major source of the domestic supply of vegetable oil. However, by the mid-1960s, soybeans was contributing two-thirds or more of the domestic supply of vegetable oils. Soybean oil will make an even greater contribution to the domestic supply of edible oils in the next few years, filling the gap created by declining availabilities of other food fats and oils. Industries manufacturing shortening, cooking oils, and margarine are the principal users of soybean and cottonseed oils.

The volume of soybeans crushed and the production of crude soybean oil both more than tripled from 1947 to 1965. The volume of cottonseed crushed increased 45 percent and the production of cottonseed oil increased 57 percent, although changes were small in recent years. A decline in cottonseed production is anticipated in the 1966 crop year as a result of a decrease in cotton acreage under the new program. Production of shortening and cooking oils increased 35 percent from 1954 to 1963 (table 10).

Decrease in Number of Establishments

The number of processing establishments decreased, and size of establishments increased between 1947 and 1963. New and more efficient machinery and equipment was introduced resulting in more efficient operations and increased oil yield. Some of these changes occurred both at the first level of vegetable oil processing, (soybean and cottonseed oil extraction plants), and in the final stages in which vegetable oils are changed into consumer products. Innovations in machinery and other equipment and in processing techniques are expected to continue as these industries progress along with an expanding national economy.

Among the cottonseed processors, number of establishments decreased 40 percent from 1947 to 1963 (table 9). The average size of plant, as reflected by average value of shipments, increased 80 percent. Average value added to products manufactured increased 65 percent, according to the Census of Manufactures.

Striking technological developments occurred during this period in the oil extraction equipment used for processing cottonseed. There was a strong shift from

19/ Prepared by Thomas B. Smith, agricultural economist.

the hydraulic method of extracting oil to the more efficient screw press and solvent methods. In the early 1950s, 57 percent of the cottonseed crushed was processed by the hydraulic method compared with 32 percent by screw press and 12 percent by solvent methods. In 1963, only 9 percent was processed by the hydraulic method; 48 percent by screw press, and 43 percent by solvent methods. Adoption of more efficient oil extraction methods is expected to continue in the future.

The number of soybean oil mills decreased 24 percent from 1947 to 1963 (table 9). Average size, based on average value of shipments per plant was more than 3 times greater in 1963 than in 1947, and average value added to products produced was almost double that in 1947. Soybean processing firms are expected to increase the size of their plants and to improve processing methods and operating efficiency to meet the challenge of increases in bean production and expanding demand for soybean oil and meal in the domestic and export markets. The soybean processing industry experienced an almost complete shift from mechanical to solvent oil extraction methods during the past 2 decades. Twenty years ago, 5 percent of the beans were processed by the hydraulic method, 74 percent by the screw press method, and 20 percent by the solvent methods. In 1963, direct solvent extraction plants accounted for 94 percent of the total rated 24 hour capacity of soybeans processing plants. This shift in method of oil extraction was accompanied by decreasing number and increasing size of soybean processing plants and increased oil yields.

Similar changes occurred among manufacturers of shortening and cooking oils and of margarine, processors of vegetable oils into consumer products. Number of establishments manufacturing these products decreased 12 percent from 1947 to 1963. The average value of shipments increased 33 percent and the average value added to products manufactured increased 41 percent.

Other important technological developments introduced during the post World War period are the hydrogenation of oils, improved refining methods, deodorizing, and plasticizing. These developments made possible wider food uses of these oils.

Increase in Average Size of Plant

Most of the oilseed crushing mills and establishments manufacturing vegetable oil products that were closed were small and the new plants opened generally were larger. This is shown by changes in the number of establishments in the various employment-size groups. During the 1947-63 period, the number of establishments employing fewer than 20 employees dropped 47 percent, those employing from 20 to 99 increased 5 percent, those employing 100 to 499 increased 30 percent, and those employing 500 or more increased 100 percent. The soybean oil and cottonseed oil industries show similar changes. Similar changes are expected in the future.

A soybean oil extraction plant may now be expected to crush 3 times as many beans, on the average, as it did in 1947. The average value of product shipments has more than tripled, and the average value added to products shipped has almost doubled. The average crush per mill probably will continue to increase, keeping pace with the expected growth in bean production as new mills take a large share of the total crush.

Cottonseed oil mills have likewise grown larger in the past 2 decades. The average annual crush of a cottonseed oil mill is now twice as large as it was 20 years ago; average value of product shipments are more than three-fourths larger and the average value added to the products by manufacturers are more than two-thirds larger.

The trend toward fewer but larger establishments is expected to continue as managements strive to increase efficiency and reduce operating costs through the installation of new and improved machinery and equipment, and the application of new and more efficient operating methods and techniques.

Change in Number of Companies

Increasing industry concentration is indicated through the strong trend towards fewer controlling companies. Companies processing soybeans decreased 35 percent in number from 1947 to 1963. Companies processing cottonseed dropped 33 percent during this period (table 9). Many smaller or less efficient companies probably will merge with larger companies.

Outlook

Large quantities of soybean and cottonseed oils have been exported since World War II, and exports are expected to continue strong as the world-wide demand for fats and oils continues to rise with the rise in population.

These vegetable oils are expected to continue to make a significant contribution to special export programs. Since the beginning of the Public Law 480 program in 1954, over half of the cottonseed and soybean oils exported have moved under this program. In addition to soybean oil, soybean beverages and soybean flour in the form of consumer products may prove important as diet supplements.

Even though little change is expected in the U.S. per capita consumption of fats and oils, uses may shift among types within the next few years. Soybean oil now supplies the greatest share of the edible vegetable oils market and this will continue for some years; but other competing fats and oils such as cottonseed, corn, safflower and peanut oils and lard and edible tallow are interchangeable to a large extent in their use in the manufacture of edible products. The quantities of the different oils available and their prices will continue to be primary determinants in their use by the edible oils industry.

Changing food habits and publicity given to the so-called "polyunsaturated" fats and their alleged relationship to heart disease are among the factors which have contributed to the current and expected increase use of liquid fats in the diets of Americans.

The development and adoption of new technologies are expected to continue in the years to come as firms in the industry strive for greater efficiency in satisfying the growing world-wide demand for fats and oils products.

Grocery Wholesaling 20/

Affiliated Wholesale Establishments

Affiliated grocery establishments--those sponsoring voluntary groups of retailers and those cooperatively owned by retailers--are now the major force in the general-line grocery wholesale trade. Between 1948 and 1963, their sales increased 274 percent (table 13). Trade sources estimate that a further increase of 20 to 25 percent occurred from 1963 to 1965. 21/ Sales of retailer owned cooperative establishments grew at a faster rate; however, they started from a much smaller base in 1948. In 1963, affiliated wholesale establishments accounted for 71 percent of general-line sales, up from 38 percent in 1948. The growth of affiliated wholesalers has been due to the realization of both wholesalers and retailers that in order to compete effectively, they had to achieve the economies of scale accruing to their chain competitors.

The number of affiliated grocery establishments increased sharply between 1958 and 1963 after declining from 1948 to 1958. Voluntaries accounted for most or all of this increase. Sales per voluntary establishment almost tripled between 1948 and 1963 while sales per cooperative establishment increased 556 percent.

Sponsoring a voluntary group of retailers affords the wholesaler a relatively stable base of loyal customers. In return for this loyalty, the wholesaler provides the retailer with a merchandising and promotional program and the services of specialists in store operation. Moreover, many voluntary group sponsors provide financial assistance, accounting, store design and layout, advertising, store employee training, and many other services designed to improve retailer effectiveness. Services provided by retailer-owned cooperatives vary, but this type of operation provides the retailer dual benefits: (1) The economies resulting from purchasing in larger quantities, and (2) a share of any profits earned by the cooperative.

Non-affiliated Wholesale Establishments

In contrast to the rise of affiliated wholesale grocery establishments, sales and number of non-affiliated general-line establishments declined between 1948 and 1963. Number of establishments declined 51 percent while total sales fell 3 percent. All of these decreases occurred between 1948 and 1958. Probably a major portion of the shift in share of the market was due to non-affiliated wholesalers changing their operation and becoming sponsors of voluntary groups. From 1958 to 1963, sales and number of non-affiliated general-line grocery establishments increased slightly.

As the non-affiliated establishments' share of the market declined, the proportion of sales to various classes of customers changed. Between 1948 and 1963, their percentage of sales to institutional and industrial users, including restaurants, increased from 8 to 15 percent. However, their share of total sales made by all general-line wholesale establishments to institutional and industrial users declined. The proportion of their sales made to retailers, where affiliated competition was strongest, declined from 88 to 79 percent.

Other Types of Wholesale Establishments

From 1948 to 1963, sales of other types of grocery wholesalers increased faster than the 30 percent rise in population but considerably slower than sales of affiliated groups and less than those of food retailers and eating places.

20/ This section and the two following were prepared by Martin Leiman, marketing specialist, and Edward A. Cohn, agricultural economist.

21/ Progressive Grocer, April 1965 and 1966.

Table 13.--Wholesale grocery food trade: Number of establishments, total sales, and sales per establishment, 1963, 1958, 1954, and 1948

Type of business	Establishments				Sales				Sales per establishment			
	1963 1/	1958	1954	1948	1963 1/	1958	1954	1948	1963 1/	1958	1954	1948
	Number	Number	Number	Number	Million dollars	Million dollars	Million dollars	Million dollars	dollars	dollars	dollars	dollars
Merchant wholesalers:												
General line	2,530	2,253	3,320	4,253	11,723	8,428	7,353	5,772	4,633	3,741	2,215	1,357
Affiliated groups:	869	673	767	845	8,270	5,236	3,762	2,210	9,517	7,780	4,905	2,619
Voluntary												
groups 2/	708	---	574	634	5,357	---	2,464	1,627	7,566	---	4,293	2,566
Retail owned												
cooperative 3/	161	---	193	211	2,913	---	1,298	582	18,093	---	6,725	2,758
Non-affiliated	1,661	1,580	2,553	3,408	3,453	3,193	3,592	3,562	2,078	2,021	1,407	1,045
Cash and carry	---	371	291	404	---	190	140	146	---	512	481	363
Other	---	1,209	2,262	3,004	---	3,003	3,452	3,416	---	2,484	1,526	1,140
Specialty line	9,923	10,279	8,849	7,154	6,273	5,783	5,107	3,077	632	563	577	430
Confectionery	2,084	2,113	1,909	1,696	858	747	527	358	412	354	276	211
Other groceries												
and related												
products 4/	7,839	8,166	6,940	5,458	5,415	5,036	4,580	2,719	691	617	660	498
Agents, brokers	2,865	3,000	2,852	2,510	8,876	7,342	7,100	4,608	3,098	2,447	2,489	1,836
Confectionery	233	210	174	109	298	266	193	90	1,279	1,267	1,109	1,211
Other groceries 4/	2,632	2,790	2,678	2,401	8,578	7,076	6,907	4,518	3,259	2,536	2,579	1,882
Manufacturers' sales												
branches and												
offices	2,579	2,270	2,605	2,744	7,794	6,505	5,379	4,881	3,022	2,866	2,065	1,779
Confectionery	239	131	132	151	596	357	333	425	2,494	2,725	2,523	2,815
Other groceries 4/	2,340	2,139	2,473	2,593	7,198	6,148	5,046	4,456	3,076	2,874	2,040	1,718

1/ 1963 includes Alaska and Hawaii, accounting for 22 general line establishments with \$43 million sales, 87 special line establishments with approximately \$33 million sales and 38 agents, brokers and manufacturers sales establishments with approximately \$47 million sales. Sales for 8 specialty line and for 1 agent, broker and manufacturers' sales establishment are not available separately. Total 1963 sales for these 9 establishments were \$2.4 million.

2/ Wholesale establishments sponsoring grocery stores.

3/ Wholesale establishments cooperatively owned by groups of grocery stores.

4/ Among products included are bakery goods, canned foods, frozen foods, coffee, tea, spices and soft drinks. Excluded are confectionery, dairy, poultry and meat products.

Compiled from Census of Business--Wholesale Trade, 1963, 1958, 1954 and 1948.

Specialty-line wholesalers doubled their sales between 1948 and 1963. Agents and brokers almost doubled their sales. Manufacturers' sales branches also increased theirs, but only by 60 percent.

The number of establishments of specialty-line wholesalers and agents and brokers declined from 1958 to 1963 following increases from 1948 to 1958. The number of manufacturers' sales branches increased in the 1958-63 period after declining in earlier years.

Retail Food Stores

Grocery Stores

There were 32 percent fewer grocery stores in the United States in 1963 than in 1948 (table 14). Most of this decrease was in stores operated by single-unit firms. From 1948 to 1954, the number of grocery stores decreased sharply as many single-unit establishments closed, and multi-unit firms closed their smaller and older stores. From 1954 to 1958, single-unit establishments continued to decline in number but at a slower rate, and there was a slight increase in the number of multi-unit establishments. From 1958 to 1963, single units continued to decline at a slower rate, while the number of multi-units increased by 19 percent. Stores operated by firms with 101 or more units accounted for almost three-fifths of this increase. These stores accounted for 53 percent of all multi-unit grocery stores in 1963.

The number of multi-unit firms increased between 1948 and 1963 (table 15). Firms operating 51 or more stores led the increase.

Average sales per grocery store more than tripled between 1948 and 1963, while retail store prices of food increased 16 percent. Stores operated by firms with 51-100 units led this increase but average sales of all grocery stores, including single units, grew rapidly. Average sales per grocery store increased an estimated 14 percent between 1963 and 1965.

Two important developments in food retailing accompanied the increase in sales per grocery store: (1) The shift in sales from single-unit firms to multi-unit firms and (2) the emergence of the supermarket.

In 1948, single-unit establishments averaging only \$42,000 in annual sales, did 59 percent of the grocery business. In 1963, however, multi-units made 57 percent of grocery store sales as shown below:

<u>Year</u>	<u>Single units</u>	<u>Multi-units</u>
	<u>Percent</u>	<u>Percent</u>
1963	43.1	56.9
1958	47.0	53.0
1954	51.8	48.2
1948	58.7	41.3

As the multi-unit firms increased their share of total grocery store sales, each multi-unit size category--in terms of number of stores operated--increased its share (table 15). Firms operating 51 or more stores increased their market share from 29 to 40 percent.

Despite this increasing share of total grocery sales, each multi-unit category's share of multi-unit sales remained fairly constant between 1948 and 1963. This means

Table 14.--Retail food stores: Number, total sales, and sales per store by kind and number of units per firm, 1963, 1958, 1954, and 1948 ^{1/}

Kind of store and number of units	Stores			
	1963	1958	1954	1948
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Grocery stores:				
Single units	215,129	234,901	254,805	347,063
2 or 3 units	5,631	4,960	5,559	5,829
4-10 units	2,789	2,312	2,171	2,497
11-50 units	3,519	3,198	3,460	3,559
51-100	2,065	1,566	1,141	1,525
101 or more units	15,705	12,859	12,304	17,466
Total	244,838	259,796	287,572	358,671
Other food stores	74,595	96,958	97,044	102,242
Total	319,433	356,754	384,616	460,913
	Sales			
	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>
Grocery stores:				
Single units	22,677	20,557	17,838	14,552
2 or 3 units	2,630	2,084	1,664	899
4-10 units	2,538	1,843	1,366	787
11-50 units	3,850	3,358	2,598	1,371
51-100 units	2,752	1,750	818	372
101 or more units	18,119	14,105	10,136	6,788
Total	52,566	43,696	34,901	25,038
Other food stores	4,513	5,529	4,861	4,170
Total	57,079	49,225	39,762	29,208
	Sales per store ^{2/}			
	<u>1,000 dollars</u>	<u>1,000 dollars</u>	<u>1,000 dollars</u>	<u>1,000 dollars</u>
Grocery stores:				
Single units	105	88	70	42
2 or 3 units	467	420	299	154
4-10 units	910	797	629	315
11-50 units	1,094	1,050	751	385
51-100 units	1,333	1,118	717	244
101 or more units	1,154	1,097	824	389
Grocery stores avg.	215	168	121	70
Other food stores	61	57	50	41
Food stores avg.	179	138	103	63

^{1/} The 1963 classification of grocery stores includes some establishments classified as general stores in previous years. The number of these stores is not available. Except for this change, totals for the 4 census years are comparable, but data for single and multi-units are not strictly comparable. Delicatessen stores are included in all data for 1963 and 1958 but only in the totals for 1954 and 1948. Further, the 1963, 1958, and 1954 censuses excluded establishments that had no paid employees and sales of less than \$2,500 a year but the census for 1948 included all establishments that had a sales volume of \$500 or more provided they operated the entire year. The totals for 1948 are based on the 1963, 1958, and 1954 definition of establishment but the detailed data are not. Because of these differences in coverage, some of the data for single and multi-units do not add to totals. Delicatessen stores numbered 8,132 in 1954 and 7,917 in 1948.

^{2/} Computed from sales in thousands of dollars.

Compiled from Census of Business--Retail Trade, 1963, 1958, 1954 and 1948.

Table 15.--Multi-unit grocery firms: Number, and percentages of total and multi-unit sales, by number of units per firm, 1963, 1958, 1954, and 1948

Number of units	Multi-unit firms			
	1963 <u>1/</u>	1958 <u>2/</u>	1954 <u>2/</u>	1948 <u>2/</u>
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
2-5	3,009	2,756	2,729	2,700
6-10	219	218	198	209
11-50	194	176	224	177
51 or more	64	39	37	33
Total	3,486	3,189	3,188	3,119
	Sales of all grocery stores <u>3/</u>			
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
2-5	6.9	6.6	6.4	4.9
6-10	2.9	2.4	2.8	1.9
11-50	7.3	7.7	7.5	5.5
51 or more	39.7	36.2	31.8	28.9
Total	56.9	53.0	48.2	41.3
	Sales of multi-units <u>3/</u>			
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
2-5	12.1	12.5	13.3	11.9
6-10	5.1	4.5	5.0	4.6
11-50	12.9	14.5	15.7	13.4
51 or more	69.9	68.5	66.0	70.1
Total	100.0	100.0	100.0	100.0

1/ Number of firms, 1963, and sales, all years, from Census of Business--Retail Trade.

2/ Number of firms, 1958, 1954, and 1948 estimated by Progressive Grocer based on data in "Chain Store Guide".

3/ Sales percentages were computed from data in Census of Business--Retail Trade, 1963, 1958, 1954, and 1948. These data for 1954 and 1948 did not include delicatessen sales. Because of the small sales volume of such stores, their exclusion does not materially effect the results.

that small multi-unit firms, with 2 to 10 stores, maintained their share of the market. However, between 1963 and 1965, trade sources estimate a 10-percent increase in the number of grocery stores operated by all multi-unit firms, compared with a 3-percent increase in number of stores owned by firms operating only 2 or 3 stores. 22/

Supermarket Institute, a trade organization, currently defines a supermarket as a retail food store having annual sales of \$1,000,000 or more with at least the grocery department self service. 23/ The number of establishments with a sales volume of \$1,000,000 or more a year increased 6-fold between 1948 and 1963 (table 16). Their sales increased more than 8-fold.

Increases in sales and number of stores with \$1,000,000 or more in sales far outstripped those of any other size of store. Number and sales of stores with less than \$100,000 annual sales declined sharply. Number and sales of stores in all other sales size categories increased; the larger the size category, the greater the increase.

In 1963, stores with annual sales of \$1,000,000 or more represented only 7 percent of the establishments but accounted for 53 percent of the sales, 52 percent of the paid employees, and 58 percent of the payroll for grocery stores. Trade sources estimate that openings of supermarkets increased from 1963 to 1965. 24/ The majority of these supermarkets are owned by firms with 101 or more establishments. However, single-establishment firms operated 17 percent of them in 1963, up from 13 percent in 1954. This indicates the strength of large independent retailers.

Corporations owned roughly nine-tenths of the grocery stores with annual sales of \$1,000,000 or more in 1963, about the same as in 1958 (table 17). In contrast, individual proprietors owned nine-tenths of all stores with less than \$100,000 in annual sales. Since large stores increased while small stores declined in number between 1948 and 1963, grocery stores operated by corporations increased and those operated by individual proprietors declined.

Affiliated grocery stores.--The growth of affiliated grocery stores has accompanied the growth of affiliated wholesalers discussed above. Most of these affiliated stores are operated by retail firms with fewer than 11 stores. According to trade sources, these stores increased their share of grocery store sales from 36 percent in 1954 to 49 percent in 1965. 25/ Sales of stores operated by firms with 11 or more stores also increased their market share. However, the proportion of total sales made by non-affiliated firms with fewer than 11 stores declined rapidly. In 1965, they accounted for only 9 percent of all grocery store sales.

The size of affiliated stores has been growing rapidly in recent years. Affiliated stores with sales of \$500,000 or more per year accounted for well over three-fifths of total sales by affiliated grocery stores in 1965.

Convenience stores.--A relatively new, but fast growing, type of food store has appeared on the retail scene. As their name implies, the appeal of these small stores is based upon convenience--drive-in parking, open long hours, 7 days a week, and a limited but complete line of food.

The 5,900 convenience stores in operation in 1965 represent a 53-percent increase since 1961. 26/ In 1965, these stores, with an average sales size about \$175,000

22/ Directory of Supermarket and Grocer Chains (New York: Business Guides, Inc., 1963 and 1965 editions).

23/ Other trade sources define the supermarket as a store with \$500,000 or \$375,000 annual sales.

24/ Progressive Grocer, April 1966, p. 150.

25/ Progressive Grocer, April 1966, p. 155.

26/ Progressive Grocer, April 1966, p. 67.

Table 16.--Grocery stores: Number and total sales, by sales-size of stores, 1963, 1958, 1954, and 1948 ^{1/}

Annual sales per store	Stores ^{2/}				Change : 1963 from 1948
	1963	:	1958	:	1948
Thousand dollars	Number	:	Number	:	Number
Less than 100	148,714	:	175,581	:	276,511
100-299	38,998	:	39,422	:	36,222
300-499	9,123	:	8,369	:	6,197
500-999	11,143	:	9,092	:	5,360
1,000 or more	14,464	:	10,332	:	1,911
Total	222,442	:	242,796	:	326,201
					-32
	Sales ^{2/}				Percent
	Million dollars	:	Million dollars	:	Million dollars
Less than 100	5,617	:	6,290	:	8,564
100-299	6,480	:	6,463	:	5,774
300-499	3,506	:	3,227	:	2,391
500-999	8,055	:	6,445	:	3,680
1,000 or more	26,405	:	18,757	:	2,757
Total	50,063	:	41,183	:	23,167
					116

^{1/} Data are not strictly comparable because 1963 and 1958 include delicatessens and the 1948 definition of establishment includes more small stores than do later definitions. (See footnote 1 to table 14.)

^{2/} Includes only stores operated the entire year.

Compiled from Census of Business--Retail Trade, 1963, 1958, 1954, and 1948.

Table 17.--Grocery stores: Number and total sales, by legal form of organization and sales size group, 1963 ^{1/}

Annual sales per store	Stores ^{2/}			
	Individual proprietorship	Partnerships	Cooperatives and others	Corporations
Thousand dollars	Number	Number	Number	Number
Less than 100 ...	133,067	12,406	283	2,958
100-299	24,367	8,286	190	6,155
300-499	3,813	1,958	51	3,301
500-999	1,906	1,328	52	7,857
1,000 or more ...	383	485	73	13,523
Total	163,536	24,463	649	33,794
	Sales ^{2/}			
	Million dollars	Million dollars	Million dollars	Million dollars
Less than 100 ...	4,813	608	13	182
100-299	3,913	1,416	33	1,118
300-499	1,435	3/	3/	1,305
500-999	1,267	910	36	5,843
1,000 or more ...	567	3/	3/	24,914
Total	11,994	4,474	232	33,362

^{1/} Includes delicatessens

^{2/} Stores operated entire year.

^{3/} Not revealed because of Census disclosure rules.

Compiled from Census of Business--Retail Trade, 1963

annually, did between 1 and 2 percent of the U.S. retail grocery store business. This type of store began and still is most prevalent in the South but has expanded widely into the East and has made some inroads in the West and North.

Ownership of convenience stores is highly concentrated. The leading firm operated almost a fourth of all convenience stores in 1964. Firms with 10 or more stores controlled 70 percent of all such stores in the same year. ^{27/}

This type of store has been successful in suburban and edge-of-city areas particularly but also in center-city areas. Their success is based upon consumer willingness to pay higher retail prices for convenience of location, quick service, and availability of merchandise when supermarkets are closed. Average amount of individual purchases is only around \$1. The extent to which consumers are willing to pay higher prices for convenience--that is, to purchase retail services--will be a primary factor in determining the market potential of convenience stores.

^{27/} Progressive Grocer, April 1965, p. 222.

Discount Stores

Trade sources estimate that supermarkets associated with discount houses had total sales of \$2.8 billion in 1965, up from \$410 million in 1960. These stores accounted for 4.5 percent of total retail food store sales in 1964. One in 3 discount houses has a food department. About half are leased departments.

Many stores calling themselves discount supermarkets are physically separated from and not associated with a general merchandise discount store. These supermarkets differ from conventional supermarkets in that they are physically larger, may carry a limited line consisting mainly of fast turnover items, and if operated by a chain, use a different store name. These discount supers may also charge lower prices and give reduced consumer services. According to one source, 1 out of every 10 new supermarkets opened in 1965 was believed to have been a discount supermarket. 28/

Acquisitions

From 1959-64, retail grocery companies acquired 1,634 grocery establishments with an estimated \$2,046 million in sales. 29/ This represents a slight decline from the unusually strong merger activity of 1955-58. 30/ However, trade sources report a sharp increase in number of mergers in 1965. 31/

During 1959-64, the third through the tenth largest chains merger activity accounted for 38 percent of all acquired establishments and 41 percent of sales. Each of these 8 firms made at least 1 major acquisition during the period. The 11th through the 50th largest grocery chains also participated heavily in merger activity, acquiring 42 percent of all establishments acquired. All other companies, including the 2 largest chains, accounted for only a fifth of all establishments acquired.

A recent Federal Trade Commission ruling restrains one of the major chains from acquiring any grocery stores without prior FTC consent. This ruling, if applied to other chains, may cause marked reduction in merger activity. A similar, though less sweeping, restraint was placed on another large chain last June.

Specialized Stores

Food stores other than grocery stores include meat and seafood markets, fruit stores, vegetable markets, candy, nut and confectionery stores, dairy product stores, retail bakeries, and miscellaneous food stores. Their number amounted to one-fourth of the total number of stores classified as retail food stores in the 1963 Census of Business (table 14). Between 1948 and 1963, their number decreased slightly more slowly than did the number of grocery stores. However, their sales increased much more slowly than sales of grocery stores. Between 1958 and 1963 their sales declined.

Specialized stores are mostly small and independently operated. Their average size was much smaller than that of the average single-unit grocery store in 1963. In 1948, the 2 were about the same size. This pattern of slow growth contrasts sharply

28/ Supermarket Industry Speaks, 1965, (Super Market Institute, Inc., Chicago, Illinois, 1965).

29/ Mergers and Acquisitions by Retail Grocery Companies, 1959-64, Marketing and Transportation Situation Reprint, ERS-253, Aug. 1965. The report, based on secondary sources, excluded acquisitions by companies not primarily engaged in the retail grocery store trade.

30/ See Federal Trade Commission, Economic Inquiry Into Food Marketing, Part I, 1960, p. 128. The FTC and USDA studies are not strictly comparable due to differences in definitions of retail grocery store companies.

31/ Progressive Grocer, April 1966, p. 9.

with the rise in consumers' total food expenditures and the even more rapid rise in sales of grocery stores. Market share of specialized stores has been lost to grocery stores and especially to supermarkets, which sell many specialty items for a lower margin than the small specialized food stores.

Future Prospects in Food Store Retailing

Supermarkets will continue to increase both in number and in sales. They provide a wide and ever increasing assortment of products at competitive prices. Their growth has paralleled increases and shifts in population. New store openings will follow developments of new residential areas and increases in sales potential of developed areas.

The size of new supermarkets has remained fairly constant in recent years, indicating that an optimum size may have been reached. However, a recent poll of supermarket executives suggests that the industry now favors a larger selling area. This increase in preferred size may be due to competition from discount house food departments as well as the proliferation of new grocery products. Because of this increase in size and the ever increasing importance of the supermarket, the average sales per grocery store will continue to rise.

Single units will continue to decline in number, and any further decrease in market share will continue to be primarily among those retailers not affiliated with a wholesaler. Stores of less than supermarket size will continue to decline in importance except in areas where the population density and other characteristics will not support a supermarket.

Affiliation with a wholesaler has allowed many small retail firms operating single- and multi-unit establishments to compete effectively with chains. The affiliated wholesaler supplies a wide range of goods at prices low enough to meet chain competition. In addition, the affiliated retailer has greater discretion than most chain store managers in pricing and displaying products. Finally, Government restraints (1) force the very large chains to limit their share of any given geographical market and (2) curb discriminatory pricing by manufacturers in favor of the large chains.

The above factors all appear destined to continue into the future, leaving the affiliated retailers in a competitive position with the larger chains. However, the very large chains appear to have more ability to establish stores in new population centers. Often promoters of shopping centers want nationally known chains in preference to independents. Also, chains have the financial ability to buy new sites somewhat before population actually begins to boom.

Eating Places

Eating places have gained an increasing portion of the consumer's food dollar in recent years. Between 1958 and 1963, sales by eating places increased 26 percent, compared with 20 percent for grocery stores and 16 percent for all retail food stores (tables 14 and 18). In this period, however, sales by eating places in constant dollars lagged behind those of grocery stores. 32/ Between 1963 and 1965, sales by eating places grew more than 50 percent faster than sales by grocery stores and constant dollar sales by eating places also grew faster than those of grocery stores. 33/

32/ The index of retail prices of away-from-home consumed foods rose 13 percent between 1958 and 1963 compared with a 1 percent increase for home consumed food.

33/ Bureau of the Census, Monthly Retail Trade Report, January 1966 and Annual Trade Report, 1964.

Table 18.--Eating places: Number, total sales, and sales per establishment, by number of units, 1963, 1958, 1954, and 1948 1/

Number of units	Establishments			
	1963	1958	1954	1948 <u>2/</u>
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Single units	203,369	211,904	181,343	183,711
2 or 3 units	8,877	7,844	6,534	4,588
4 to 10 units	3,135	2,518	1,886	1,836
11 or more units .	8,496	7,549	5,365	3,988
Total	223,877	229,815	195,128	179,185
	Sales			
	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Mil. dol.</u>	<u>Mil. dol.</u>
Single units	11,184	9,135	7,278	5,408
2 or 3 units	807	639	484	342
4 to 10 units	398	297	224	202
11 or more units .	1,531	966	745	516
Total	13,919	11,038	8,731	6,441
	Sales per establishment			
	<u>1,000 dol.</u>	<u>1,000 dol.</u>	<u>1,000 dol.</u>	<u>1,000 dol.</u>
Single units	55	43	40	29
2 or 3 units	91	81	74	75
4 to 10 units	127	118	119	110
11 or more units .	180	128	139	129
Average per establishment	62	48	45	36

1/ Definitions of eating places have changed with each census. The effect of most of these definitional changes is not available.

2/ However, the 1948 Census included eating places with no paid employees, between \$500 and \$2,500 in annual sales. Later censuses excluded such establishments. Totals for 1948 have been made comparable to earlier years, but subtotals have not. Hence, for 1948 subtotals do not add to the totals.

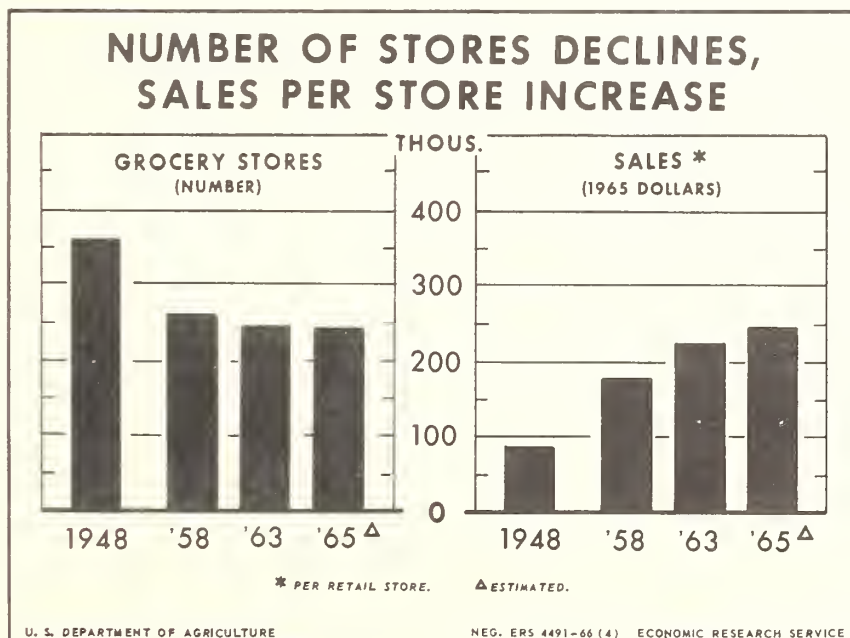
Compiled from Census of Business--Retail Trade, 1963, 1958, 1954, and 1948.

The increasing prominence of eating places in food marketing has been accompanied by an increase in the importance of eating places doing \$300,000 or more in annual sales and a decline in the importance of very small eating places. Establishments with \$300,000 annual sales made 28 percent of all eating place sales in 1963, up from 17 percent in 1948. Between 1958 and 1963, the number of establishments with less than \$50,000 annual sales declined.

The away-from-home eating industry is dominated by single-unit firms. Single units have accounted for over four-fifths of total eating place sales since 1948 (table 18). However, between 1958 and 1963, multi-unit firms with 11 or more establishments captured a modest portion of the single units' business. This trend apparently continued in 1963-65, when sales increased by eating and drinking places operated by firms with 11 or more units far exceeded sales increases by all eating places. 33/

After rising steadily from 1948 to 1958, the number of eating places had declined slightly by 1963. The 1958-63 period also saw an increase in constant dollar sales per eating place following a period of stable or declining constant dollar sales.

The rise in dollar sales of eating places has been caused by increased prices, growing population, and rising consumer purchasing power. In addition, eating places are well suited to continue taking advantage of important related changes in American habits. Two of the most important changes are increased mobility and more vacations. Other changes are (1) the rise in the number of working wives who have less time to prepare meals at home, (2) the rise in the number of older people less able to cook at home, less likely to save and more likely to desire to finally "enjoy themselves," (3) the increase in college students often without facilities, inclination or time to cook for themselves, and (4) the increase in the number of teenagers who frequent snack shops and hamburger stands. All of the factors appear destined to continue into the future and the outlook for eating places, especially those catering to the changing habits of Americans, is bright.



Appendix table 1.--Livestock purchases by packers through different market outlets,
1960 and 1964 ^{1/}

Market outlet and year	Cattle		Calves		Hogs		Sheep	
	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent
Direct, country dealers, etc.:								
1960	8,420	38.6	2,572	42.5	47,104	61.0	7,654	54.0
1964	12,363	44.6	2,081	31.7	51,964	63.1	8,430	57.7
Terminal markets:								
1960	9,987	45.8	1,538	25.4	23,356	30.3	5,020	35.4
1964	10,124	36.5	1,231	18.8	19,608	23.8	4,180	28.6
Auction markets:								
1960	3,399	15.6	1,940	32.1	6,695	8.7	1,493	10.6
1964	5,244	18.9	3,242	49.5	10,801	13.1	2,007	13.7
Total:								
1960 (1,383 packers):	21,806	100.0	6,050	100.0	77,155	100.0	14,167	100.0
1964 (1,368 packers):	27,731	100.0	6,554	100.0	82,373	100.0	14,617	100.0

^{1/} Summarized from annual reports of packers filed with the Packers and Stockyards Division, Consumer and Marketing Service, USDA; includes data for all firms purchasing more than 1,000 head of cattle or 2,000 head of all livestock during the reporting period.

Appendix table 2.--Cattle and calves fed by or for meat packers compared with marketings
of fed cattle from 39 States, 1955 and 1960-64

Year	Firms feeding cattle and calves ^{1/}	Packer fed cattle and calves ^{1/}	Marketings of fed cattle from 39 States ^{2/}	Packer fed stock as percentage of marketings
	Number	1,000 head	1,000 head	Percent
1955	161	545.8	10,762	5.1
1960	165	856.7	13,346	6.4
1961	206	919.2	14,159	6.5
1962	215	981.4	14,752	6.6
1963	211	1,175.6	15,830	7.4
1964	190	1,126.8	17,295	6.5

^{1/} Compiled from annual reports of packers filed with the Packers and Stockyards Division, Consumer and Marketing Service, USDA; includes livestock fed by or for meat packers and removed from feedlot for slaughter or sale during the reporting period. Separate feeding activities by owners, officers, or employees of meat packers or nonreporting subsidiaries or affiliates are not included.

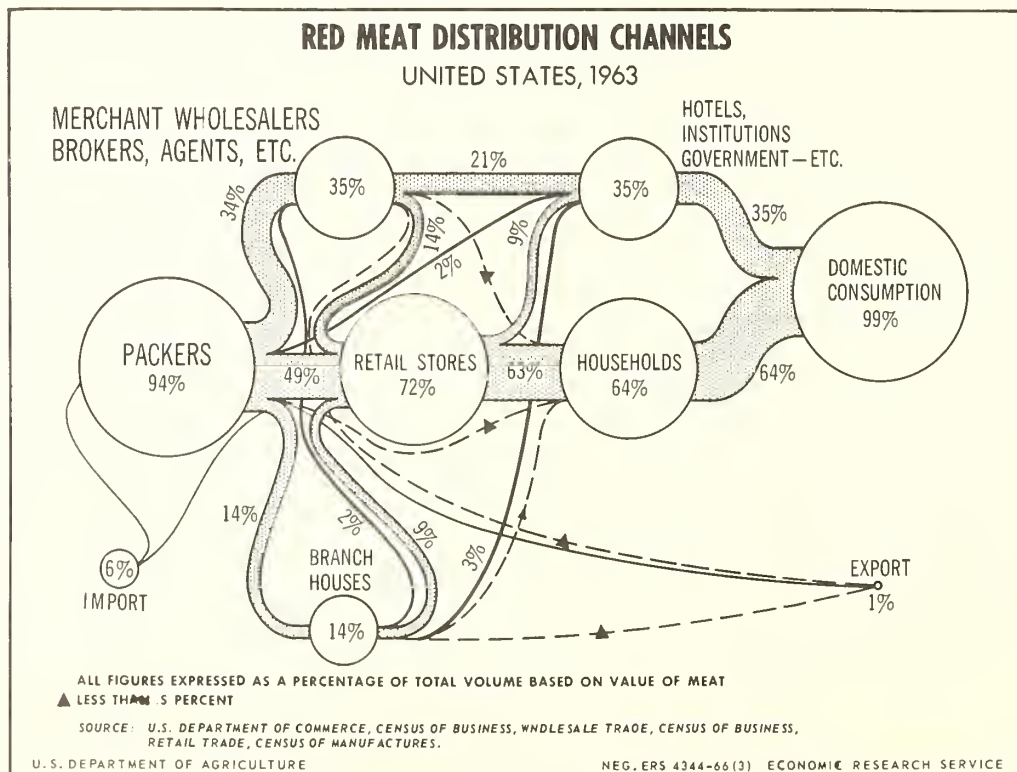
^{2/} Livestock and Meat Situation, Economic Research Service, USDA, LMS-145, October 1965, Table 1, page 33.

Appendix table 3.--Percentage distribution of total slaughter in 48 States, by regions, 1944, 1950, 1958, and 1964

Species and region	1944	1950	1958	1964
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Cattle and calves:				
North Atlantic	14.5	15.4	13.2	11.5
South Atlantic	5.9	5.6	6.4	5.5
East North Central ..	25.0	26.2	24.5	18.3
West North Central ..	26.8	26.0	26.3	32.2
South Central	16.1	14.0	14.5	15.0
West	11.7	12.8	15.1	17.6
Total	100.0	100.0	100.0	100.0
Hogs:				
North Atlantic	10.8	9.5	9.2	7.5
South Atlantic	6.8	7.1	8.6	8.7
East North Central ..	27.7	27.4	25.9	24.7
West North Central ..	39.9	40.6	40.8	43.1
South Central	8.1	8.4	9.6	10.8
West	6.7	7.6	5.9	5.3
Total	100.0	100.0	100.0	100.0
Sheep and lamb:				
North Atlantic	16.6	19.8	17.0	13.1
South Atlantic9	.7	.9	.5
East North Central ..	18.5	13.5	14.2	9.9
West North Central ..	39.7	36.8	31.3	28.1
South Central	7.3	6.9	8.1	13.3
West	17.0	22.3	28.5	35.0
Total	100.0	100.0	100.0	100.0

Appendix table 4.--Commercial slaughter plants: Number and percentage distribution, by region, 1950, 1955, 1960, and 1965

Region	1950		1955		1960		1965	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
North Atlantic (9 States)	774	23.9	619	19.3	599	19.0	516	17.5
East North Central: (5 States)	800	24.7	774	24.1	722	23.0	657	22.2
West North Central: (7 States)	313	9.7	290	9.0	312	9.9	368	12.4
South Atlantic (8 States)	370	11.4	445	13.8	418	13.3	383	13.0
South Central (8 States)	510	15.8	622	19.3	631	20.1	588	19.9
West (11 States)	471	14.5	467	14.5	462	14.7	445	15.0
Total (48 States) ..	3,238	100.0	3,217	100.0	3,144	100.0	2,957	100.0



Appendix table 5.--Percentage of total federally inspected slaughter accounted for by 10 largest firms, selected years, 1950-64

Species and rank of firms	1950	1954	1958	1962	1964
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Cattle:					
Largest 4	51.5	45.2	35.7	29.5	28.1
5th through 10th	8.7	10.0	10.5	10.4	11.5
Largest 10	60.2	55.2	46.2	39.9	39.6
Calves:					
Largest 4	58.0	59.3	49.7	39.9	43.8
5th through 10th	12.9	11.7	13.9	16.3	15.9
Largest 10	70.9	71.0	63.6	56.2	59.7
Sheep:					
Largest 4	69.6	68.7	64.4	58.9	62.2
5th through 10th	15.9	16.1	17.2	17.1	19.0
Largest 10	85.5	84.8	81.6	76.0	81.2
Hogs:					
Largest 4	48.5	48.4	41.3	39.0	36.9
5th through 10th	22.1	23.0	23.4	21.5	21.4
Largest 10	70.6	71.4	64.7	60.5	58.3
Total:					
Largest 4	50.8	46.6	38.9	35.0	32.7
5th through 10th	15.8	16.1	15.9	14.1	14.2
Largest 10	66.6	62.7	54.8	49.1	46.9

Appendix table 6.--Meat products industries: Number of companies and establishments, value of shipments, and value added by manufacture, 1963, 1958, 1954, and 1947 1/

Year	Meat slaughtering	Meat processing <u>2/</u>	Poultry dressing <u>3/</u>
	<u>Number</u>	<u>Number</u>	<u>Number</u>
Companies:			
1963	2,833	1,273	842
1958	2,646	1,430	1,095
1954	2,228	1,254	1,189
1947	1,999	---	330
Establishments:			
1963	2,992	1,341	967
1958	2,801	1,494	1,233
1954	2,367	1,316	1,309
1947	2,154	<u>4/</u> 1,264	553
	<u>Million</u>	<u>Million</u>	<u>Million</u>
	<u>dollars</u>	<u>dollars</u>	<u>dollars</u>
Value of shipments:			
1963	12,435	2,130	2,241
1958	11,972	2,066	1,888
1954	10,265	1,541	1,332
1947	8,970	<u>4/</u> 1,601	479
Value added by manufac-			
ture adjusted:			
1963	1,908	563	411
1958	1,749	442	311
1954	1,397	334	207
1947	977	<u>4/</u> 235	68

1/ Data for 1958 and 1963 include Alaska and Hawaii.

2/ Sausage casing plants were included in this industry until Census of 1963.

3/ Census of Manufactures for 1963 and 1958 included plants canning poultry and plants processing liquid, dried, and frozen eggs in this industry.

4/ Includes manufacturers' wholesale branches that manufacture prepared meats.

U.S. Bureau of the Census, Census of Manufactures, 1963, Meat Products, SIC Codes 2011, 2013, 2015.

Appendix table 7.--Wholesale food trade for meat and meat products: Number of establishments, total sales, and average sales per establishment, 1963, 1958, 1954, and 1948

Type of business	Establishments			
	1963	1958	1954	1948
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Meat, meat products:				
Merchant wholesalers	5,170	4,482	4,357	3,200
Agents, brokers	134	154	97	58
Manufacturers' sales offices and branches	577	522	665	753
	Total sales			
	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>
Meat, meat products:				
Merchant wholesalers	5,371	3,891	2,866	1,977
Agents, brokers	810	609	521	571
Manufacturers' sales offices and branches	2,446	2,263	2,703	2,757
	Sales per establishment			
	<u>Thousand dollars</u>	<u>Thousand dollars</u>	<u>Thousand dollars</u>	<u>Thousand dollars</u>
Meat, meat products:				
Merchant wholesalers	1,039	868	658	618
Agents, brokers	6,048	3,954	5,367	9,851
Manufacturers' sales offices and branches	4,239	4,335	4,065	3,661

Compiled from Census of Business-Wholesale Trade, 1963, 1958, 1954, and 1948.

Appendix table 8.--Plants making selected manufactured dairy products, selected years, 1940-55 and years 1960-64

Year	Butter	Natural cheese <u>1/</u>	Creamed cottage cheese	Evaporated milk <u>2/</u>	Nonfat dry milk <u>3/</u>	Ice cream <u>4/</u>	All dairy manufacturing plants
	Number	Number	Number	Number	Number	Number	Number
1940 ...	4,692	---	1,783	142	273	4,191	---
1944 ...	4,015	2,856	1,644	144	498	3,536	9,739
1945 ...	3,763	2,565	1,603	145	498	3,699	---
1950 ...	3,060	2,158	1,571	---	459	3,269	---
1955 ...	2,343	1,789	1,748	---	461	3,010	---
1960 ...	1,659	1,419	1,370	72	442	1,950	---
1961 ...	1,510	1,410	1,263	72	431	1,905	6,134
1962 ...	1,427	1,355	1,193	66	425	1,805	---
1963 ...	1,320	1,283	1,094	63	407	1,729	---
1964 ...	1,224	1,252	1,021	59	393	1,682	---

1/ All "hard" cheeses, cream, Neufchatel and blue mold; excludes full-skim American-type and cottage cheese.

2/ Whole unsweetened, unskimmed case goods (canned).

3/ For human food.

4/ Excludes counter freezers (plants producing less than 20,000 gallons per year).

Compiled from Production of Manufactured Dairy Products, 1964. U.S. Dept. Agr., SRS, DA 2-1 (65), July 1965, and earlier years; J. M. Cowden and H. C. Trelogan: Flexibility of Operation in Dairy Manufacturing Plants, U.S. Dept. Agr., Circ. 799, Sept. 1948; D. H. Carley and T. L. Cryer: Flexibility of Operation in Dairy Manufacturing Plants, Changes 1944 to 1961, U.S. Dept. Agr., Agr. Econ. Rpt. 61, Oct. 1964.

Appendix table 9.--Butter and American cheese: Distribution of plants and production by output per plant, 1944, 1957, 1961, and 1963

Product and output per plant	Plants				Production	
	1944	1957	1961	1963	1944	1961
<u>1,000 pounds</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Percent</u>	<u>Percent</u>
Butter:						
Less than 100 ...	1,513	576	389	340	3.5	1.0
100-499	1,740	752	466	374	29.2	8.0
500-999	403	337	250	221	18.9	12.1
1,000-1,999	237	224	180	167	22.2	17.0
2,000-2,999	} 122	82	97	89	} 26.2	16.4
3,000-3,999		43	54	60		12.5
4,000 or more ...		48	74	70		33.0
Total	4,015	2,062	1,510	1,321	100.0	100.0
American cheese:						
Less than 100 ...	316	118	83	84	1.8	.2
100-499	1,356	416	300	222	43.5	8.1
500-999	292	372	307	277	24.6	30.0
1,000-1,999	132	190	200	222	22.0	24.4
2,000 or more ...	23	98	72	119	8.1	35.4
Total	2,119	1,194	1,023	924	100.0	100.0

Compiled from J. M Cowden and H. C. Trelogan: Flexibility of Operation in Dairy Manufacturing Plants, U.S. Dept. Agr., Circ. 799, Sept. 1948; D. H. Carley and T. L. Cryer: Flexibility of Operation in Dairy Manufacturing Plants, Changes 1944 to 1961, U.S. Dept. Agr., Agr. Econ. Rpt. 61, Oct. 1964; W. D. Bormuth and D. B. Jones: Plants Manufacturing Dairy Products by Production-Size Groups and Geographic Distribution, 1957, U.S. Dept. Agr., AMS-301, March 1959; W. D. Bormuth and T. L. Cryer: Plants Manufacturing Dairy Products by Production-Size Groups and Geographic Distribution, 1963, U.S. Dept. Agr., SRS-5, March 1965.

Appendix table 10.--Concentration ratios in dairy manufacturing industries, 1958, 1954, and 1947

Industry and year	Percentage of value of shipments accounted for by--		
	4 largest	8 largest	20 largest
	companies	companies	companies
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Butter:			
1958	11	18	28
1954	16	24	34
1947	18	24	32
Natural cheese:			
1958	35	42	50
1954	25	30	39
1947	27	32	40
Concentrated and dried milk products:			
1958	50	60	73
1954	55	68	80
1947	50	63	76
Frozen desserts:			
1958	38	48	59
1954	36	45	57
1947	40	48	57

Compiled from U.S. Bureau of the Census, 1962, Concentration Ratios in Manufacturing Industry, 1958.

Appendix table 11.--Percentage distribution of sales of homogenized milk by 80 fluid milk distributors, by type of outlet, January-March quarter, selected years, 1954-64

Year	Home delivered	Wholesale	Platform	Other	Total
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1954	37.2	47.5	10.6	4.7	100.0
1956	37.0	51.5	10.0	1.5	100.0
1958	38.6	50.9	7.2	3.3	100.0
1960	37.9	51.4	8.9	1.9	100.0
1962	30.9	57.1	10.0	2.0	100.0
1964	28.7	60.1	8.6	2.6	100.0

Appendix table 12.--Plants slaughtering poultry under Federal inspection by volume of live-weight slaughtered, 1962 and 1964

Volume per plant	1962				1964			
	Plants		Volume		Plants		Volume	
	No.	Pct.	1,000 lb.	Pct.	No.	Pct.	1,000 lb.	Pct.
1,000 pounds (live weight):								
Less than 1 ..	4	0.8	---	---	---	---	---	---
1-99	16	3.0	671	1/	10	2.1	401	1/
100-199	10	1.9	1,260	1/	13	2.7	1,901	1/
200-299	13	2.4	3,222	1/	9	1.9	2,194	1/
300-399	9	1.7	3,118	1/	5	1.0	1,834	1/
400-499	7	1.3	3,128	1/	8	1.7	3,518	1/
500-599	4	.8	2,219	1/	6	1.2	3,236	1/
600-699	9	1.7	5,855	0.1	5	1.0	3,159	1/
700-799	5	.9	3,710	1/	6	1.2	4,544	1/
800-899	6	1.1	5,054	.1	3	.6	2,531	1/
900-999	4	.8	3,810	1/	8	1.7	7,570	1/
1,000-1,999 ..	34	6.4	51,624	.6	20	4.1	28,404	0.3
2,000-2,999 ..	24	4.5	61,720	.8	26	5.4	63,178	.7
3,000-3,999 ..	23	4.3	78,113	1.0	18	3.7	62,315	.7
4,000-4,999 ..	18	3.4	77,922	1.0	11	2.3	48,840	.6
5,000-5,999 ..	14	2.6	77,339	1.0	9	1.9	49,141	.6
6,000-6,999 ..	17	3.2	111,324	1.4	11	2.3	70,832	.8
7,000-7,999 ..	18	3.4	135,542	1.7	12	2.5	91,446	1.1
8,000-8,999 ..	19	3.6	162,314	2.0	12	2.5	103,603	1.2
9,000-9,999 ..	19	3.6	182,197	2.3	11	2.3	104,579	1.2
10,000-19,999 :	112	21.0	1,676,365	20.8	105	21.8	1,524,184	17.1
20,000-29,999 :	63	11.8	1,548,765	19.2	67	13.9	1,686,921	18.9
30,000-39,999 :	36	6.7	1,238,188	15.4	46	9.5	1,556,204	17.4
40,000-49,999 :	19	3.6	845,281	10.5	23	4.8	1,019,961	11.4
50,000-59,999 :	15	2.8	834,814	10.4	12	2.5	661,505	7.4
60,000-69,999 :	10	1.9	637,828	7.9	19	3.9	1,235,621	13.8
70,000 or more:	4	.8	303,451	3.8	7	1.5	606,323	6.8
Total	532	100.0	8,054,834	100.0	482	100.0	8,943,945	100.0

1/ Less than one-half of one-tenth percent.

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 13.--Poultry slaughtering plants under Federal inspection and annual volume of slaughter of all poultry, by volume per plant and by region, 1962 and 1964

Region	1962									
	Plant volume size group in pounds									
	Plants					Annual volume				
	Less than : 1,500,000	to : 5,200,000	to : 15,600,000	Total	No.	Less than : 1,500,000	to : 5,200,000	to : 15,600,000	Total	No.
North Atlantic	24	11	16	51	70	9,601	34,095	143,155	585,255	772,106
East North Central ..	33	24	25	82	87	15,316	72,678	234,781	112,367	435,142
West North Central ..	9	29	34	72	89	5,309	89,375	327,880	368,939	791,503
South Atlantic	15	7	17	39	111	8,904	23,043	174,623	2,595,435	2,802,005
South Central	14	10	31	55	123	5,313	32,536	353,524	2,211,839	2,603,212
West	8	5	23	36	52	7,656	12,954	214,494	415,762	650,866
Total	103	86	146	335	532	52,099	264,681	1,448,457	6,289,597	8,054,834
Region	1964									
	Plant volume size group in pounds									
	Plants					Annual volume				
	Less than : 1,500,000	to : 5,200,000	to : 15,600,000	Total	No.	Less than : 1,500,000	to : 5,200,000	to : 15,600,000	Total	No.
North Atlantic	18	12	13	43	61	7,451	38,910	136,022	628,413	810,796
East North Central ..	22	15	20	57	64	12,110	45,019	194,769	156,110	408,008
West North Central ..	10	19	31	60	80	5,305	55,594	328,595	498,560	888,054
South Atlantic	16	5	9	30	107	8,170	10,207	92,450	3,034,078	3,144,905
South Central	11	7	18	36	118	5,670	19,839	197,300	2,861,298	3,084,107
West	7	8	22	37	53	5,082	30,540	218,062	354,391	608,075
Total	84	66	113	263	483	43,788	200,109	1,167,198	7,532,850	8,943,945

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 14.--Plants slaughtering poultry under Federal inspection by volume and by kind of poultry, 1963

Annual volume	Major kind of poultry slaughtered					
	Young chickens	Mature chickens	Turkeys	Other	Total	
Million pounds	Number	Number	Number	Number	Number	
Less than 1	19	11	36	9	75	
1-4	26	19	30	10	85	
5-9	27	13	29	1	70	
10-19	61	13	41	2	117	
20-29	53	1	11	0	65	
30-39	30	0	6	0	36	
40 or more	56	0	0	0	56	
Total	272	57	153	22	504	

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 15.--Plants slaughtering, eviscerating, and further-processing poultry under Federal inspection, 1960-65

Year	Dressing and eviscerating	Eviscerating and further-processing 1/	Further-processing only	Total plants further-processing
	Number	Number	Number	Number
1960	546	64	231	295
1961	536	82	271	353
1962	531	88	290	378
1963	488	80	306	386
1964	477	99	328	427
1965	477	105	347	452

1/ Further-processors start with ready-to-cook birds, then cook and usually debone the meat and prepare a large variety of canned, frozen, and dried products.

Compiled from the List of Plants Operating Under USDA Poultry and Egg Inspection and Grading Programs, AMS-15, Dec. 1960, Dec. 1961, June 1962, June 1963, and July 1964, and C&MS-SRA-184, USDA, Consumer and Marketing Service, Mar. 1965. Number of plants listed as of any given date may be lower than the number which actually operated during the year.

Appendix table 16.--Further-processors of poultry: Number of plants and volume of ready-to-cook poultry meat used, by regions, 1964

Region	Plants		Volume of ready-to-cook poultry used	
	No.	Pct.	Mil. lb.	Pct.
North Atlantic	113	25.5	81	12.9
East North Central	79	17.8	94	14.8
West North Central	73	16.4	211	33.4
South Atlantic	62	14.0	119	18.8
South Central	48	10.8	68	10.7
Western	69	15.5	59	9.4
Total	444	100.0	632	100.0

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 17.--Plants by annual volume of poultry meat used in producing further-processed products and by regions, 1964

Region	Thousand pounds					Total
	Less than 100	100- 499	500- 999	1,000- 4,999	5,000 or more	
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
North Atlantic	59	22	14	13	5	113
East North Central :	43	15	7	9	5	79
West North Central :	27	14	4	15	13	73
South Atlantic	23	17	9	7	6	62
South Central	22	12	4	6	4	48
Western	44	8	3	11	3	69
Total	218	88	41	61	36	444

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 18.--Poultry and poultry products wholesalers: Number of establishments, total sales, 1963, 1958, and 1954

Year	Merchant wholesalers	Agents and brokers	Manufacturers' sales offices and branches	Assemblers of farm products
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Establishments:				
1963	1,942	104	29	1,533
1958	2,082	168	52	1,724
1954	2,660	1/	---	1/
	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>
Total sales:				
1963	1,628	313	58	764
1958	1,462	204	99	808
1954	1,475	1/	---	1/

1/ Dairy and poultry products combined.

Compiled from Census of Business--Wholesale Trade.

Appendix table 19.--Chicken hatcheries and incubator egg capacity by size groups and by regions, January 1, 1961 and 1965

Capacity size group	North Atlantic	East North Central	West North Central	South Atlantic	South Central	West <u>1/</u>	United States
Number of eggs	Number of hatcheries January 1, 1961 <u>2/</u>						
Less than 25,000 ..	90	50	56	27	88	47	358
25,000-59,999	115	185	353	60	132	61	906
60,000-99,999	84	204	405	48	99	51	891
100,000-199,999 ...	61	109	197	138	115	40	660
200,000-499,999 ...	50	68	91	139	126	41	515
500,000 or more ...	23	16	17	59	55	13	183
Total	423	632	1,119	471	615	253	3,513
	Number of hatcheries January 1, 1965						
Less than 25,000 ..	45	31	50	7	44	26	203
25,000-59,999	56	111	193	12	68	38	478
60,000-99,999	50	130	258	30	50	26	544
100,000-199,999 ...	55	82	140	89	81	39	486
200,000-499,999 ...	42	47	64	108	102	39	402
500,000 or more ...	20	13	18	92	93	16	252
Total	268	414	723	338	438	184	2,365
	Incubator egg capacity January 1, 1961 (000) <u>2/</u>						
Less than 25,000 ..	1,203	805	874	417	1,188	667	5,154
25,000-59,999	4,314	7,541	14,925	2,619	5,202	2,424	37,025
60,000-99,999	6,386	15,218	30,412	4,439	7,343	3,850	67,648
100,000-199,999 ...	8,346	14,954	27,158	20,370	16,652	5,650	93,130
200,000-499,999 ...	15,477	20,960	25,732	46,253	39,802	11,592	159,816
500,000 or more ...	23,043	10,475	14,476	46,765	41,725	9,243	145,727
Total	58,769	69,953	113,577	120,863	111,912	33,426	508,500
	Incubator egg capacity January 1, 1965 (000)						
Less than 25,000 ..	654	487	1,383	110	674	326	3,634
25,000-59,999	2,162	4,487	8,052	473	2,725	1,472	19,371
60,000-99,999	3,789	9,869	19,895	2,489	3,862	2,044	41,948
100,000-199,999 ...	7,686	11,621	19,555	13,177	12,006	5,803	69,848
200,000-499,999 ...	12,726	13,584	18,240	35,787	33,888	11,632	125,857
500,000 or more ...	18,932	8,595	14,813	72,756	83,782	11,782	210,660
Total	45,949	48,643	81,938	124,792	136,937	33,059	471,318

1/ Includes Hawaii for January 1, 1965.

2/ Excludes Hawaii.

Hatchery Production, October 1965, Pou. 1-1 (11-65).

Appendix table 20.--Turkey hatcheries and incubator egg capacity by size groups and by regions, January 1, 1961 and 1965 ^{1/}

Capacity size group	North Atlantic	East North Central	West North Central	South Atlantic	South Central	West	United States
Number of hatcheries January 1, 1961							
Less than 25,000	84	23	42	22	21	24	216
25,000-59,999	38	18	47	13	17	23	156
60,000-99,999	<u>2/15</u>	8	34	14	7	18	<u>2/96</u>
100,000-199,999	---	12	37	7	14	27	97
200,000 or more	---	7	16	8	4	21	56
Total	137	68	176	64	63	113	621
Number of hatcheries January 1, 1965							
Less than 25,000	41	15	24	7	8	23	118
25,000-59,999	16	18	30	5	11	22	102
60,000-99,999	<u>2/15</u>	8	24	10	8	15	<u>2/80</u>
100,000-199,999	---	11	27	9	17	15	79
200,000 or more	---	10	18	12	9	25	74
Total	72	62	123	43	53	100	453
Incubator egg capacity January 1, 1961 (000)							
Less than 25,000	834	422	582	248	244	374	2,704
25,000-59,999	1,274	808	1,914	526	687	834	6,043
60,000-99,999	<u>2/1,311</u>	656	2,727	1,010	542	1,399	<u>2/7,645</u>
100,000-199,999	---	1,882	5,345	1,031	1,726	3,527	13,511
200,000 or more	---	2,690	5,391	4,140	1,276	6,338	19,835
Total	3,419	6,458	15,959	6,955	4,475	12,472	49,738
Incubator egg capacity January 1, 1965 (000)							
Less than 25,000	406	218	284	103	105	340	1,456
25,000-59,999	557	703	1,228	208	406	860	3,962
60,000-99,999	<u>2/1,496</u>	573	2,143	788	619	1,195	<u>2/6,814</u>
100,000-199,999	---	1,439	4,113	1,267	2,207	1,985	11,011
200,000 or more	---	3,281	6,891	5,235	2,875	9,560	27,842
Total	2,459	6,214	14,659	7,601	6,212	13,940	51,085

^{1/} Does not include Alaska and Hawaii.

^{2/} Hatcheries in the North Atlantic with 100,000 or more capacity included to avoid disclosing individual operations.

Hatchery Production, October 1965, Pou. 1-1 (11-65).

Appendix table 21.--Distribution of respondent egg handling firms and eggs sold off farms, by regions, and average receipts per firm, 1958

Region	Firms receiving eggs from farmers		Eggs sold from farms		Annual average volume per firm
	Number	Percent	1,000 cases	Percent	Cases
New England	104	0.8	7,675	5.0	36,596
Middle Atlantic	508	3.9	20,856	13.5	33,142
East North Central	5,270	40.9	30,628	19.9	4,961
West North Central	3,925	30.4	42,267	27.4	11,706
South Atlantic	577	4.5	14,867	9.6	15,827
East South Central	274	2.1	7,345	4.8	11,770
West South Central	650	5.0	9,452	6.1	9,583
Mountain	444	3.4	3,640	2.4	6,320
Pacific	1,158	9.0	17,438	11.3	12,307
United States	12,910	100.0	154,167	100.0	9,944

F. L. Faber and J. R. Pedersen: Research to Improve Reporting on Eggs Moving into Commercial Trade Channels, USDA, Economic Research Service, ERS-11, Aug. 1961, p. 13.

Appendix table 22.--Plants producing frozen and dried eggs under Federal inspection and grading programs, 1965 and 1960

Region	Frozen eggs		Dried eggs	
	1965	1960	1965	1960
	Number	Number	Number	Number
Northeast	2	2	0	0
South	23	7	2	1
Midwest	63	92	16	14
West	8	4	3	1
Total	96	105	21	16

Compiled from the List of Plants Operating Under USDA Poultry and Grading Programs, AMS-15, USDA, Agricultural Marketing Service, Dec. 1960, and C&MS-SRA-184, USDA, Consumer and Marketing Service, March 1965.

Appendix table 23.--Egg assembly firms reporting for "Weekly Commercial Egg Movement Report":
Number and volume handled per week, by volume size group, during spring months, 1963 and 1965

Volume size group	1963 <u>1/</u>				1965 <u>2/</u>			
	Firms		Volume		Firms		Volume	
	Cases	Number	Percent	Cases	Percent	Number	Percent	Cases
Less than 400	143	18.0	37,503	2.7	<u>3</u> /136	19.7	29,143	2.2
400-499	64	8.0	28,491	2.1	60	8.7	26,694	2.0
500-599	55	6.9	29,965	2.2	49	7.1	27,038	2.0
600-699	44	5.5	28,422	2.1	32	4.6	20,512	1.5
700-799	46	5.8	34,557	2.5	31	4.5	23,250	1.8
800-899	40	5.0	34,001	2.5	28	4.1	23,828	1.8
900-999	22	2.8	20,685	1.5	26	3.8	24,571	1.9
1,000-1,099	31	3.9	32,426	2.3	18	2.6	18,757	1.4
1,100-1,199	15	1.9	17,157	1.2	16	2.3	18,224	1.4
1,200-1,299	25	3.1	30,989	2.2	19	2.8	23,930	1.8
1,300-1,399	25	3.1	33,824	2.4	8	1.2	10,785	.8
1,400-1,499	19	2.4	27,513	2.0	9	1.3	13,083	1.0
1,500-1,599	18	2.3	27,677	2.0	26	3.8	40,111	3.0
1,600-1,999	57	7.2	102,637	7.4	52	7.5	95,043	7.2
2,000-2,999	87	10.9	210,110	15.2	58	8.4	138,576	10.5
3,000-3,999	34	4.3	116,352	8.4	46	6.7	159,472	12.0
4,000-4,999	26	3.3	115,028	8.3	19	2.8	84,638	6.4
5,000-5,999	10	1.3	54,000	3.9	15	2.2	82,015	6.2
6,000-6,999	8	1.0	51,154	3.7	12	1.7	77,800	5.9
7,000-7,999	4	.5	29,777	2.2	5	.7	35,789	2.7
8,000-8,999	3	.4	24,963	1.8	6	.9	50,626	3.8
9,000-9,999	5	.6	47,283	3.4	5	.7	47,859	3.6
10,000 or more	14	1.8	249,132	18.0	13	1.9	253,356	19.1
Total	795	100.0	1,383,646	100.0	689	100.0	1,325,100	100.0

1/ Five-week average mostly mid-April to mid-May.

2/ Five-week average mostly March to early April.

3/ Includes 3 firms reporting no eggs received from farmers.

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 24.--Egg assembly firms reporting for "Weekly Commercial Egg Movement Report": Number and volume handled per week during spring months, 1963 and 1965

Region	1963 1/											
	Plant volume size group in cases											
	Firms						Volume of eggs handled per week					
	Less than:		4,000-		Total		Less than:		400-		Total	
	400-	699	700-	999	1,000-	3,999	400-	699	700-	999	1,000-	3,999
	Number	Number	Number	Number	Number	Number	Cases	Cases	Cases	Cases	Cases	Cases
North Atlantic	10	25	16	65	13	129	3,342	13,439	13,147	123,050	77,645	230,623
East North Central :	33	30	17	42	13	135	8,148	16,304	13,814	80,052	93,419	211,737
West North Central :	54	56	38	88	14	250	14,406	28,857	31,197	171,773	104,677	350,910
South Atlantic	24	15	15	51	9	114	6,435	7,838	12,714	103,152	44,317	174,456
South Central	15	17	16	31	7	86	3,460	9,766	13,379	58,298	50,899	135,802
West	7	20	6	34	14	81	1,712	10,674	4,992	62,360	200,380	280,118
Total	143	163	108	311	70	795	37,503	86,878	89,243	598,685	571,337	1,383,646
Region	1965 2/											
	Plant volume size group in cases											
	Firms						Volume of eggs handled per week					
	Less than:		4,000-		Total		Less than:		400-		Total	
	400-	699	700-	999	1,000-	3,999	400-	699	700-	999	1,000-	3,999
	Number	Number	Number	Number	Number	Number	Cases	Cases	Cases	Cases	Cases	Cases
North Atlantic	9	26	16	53	13	117	2,215	13,668	13,584	103,808	89,254	222,529
East North Central :	36	30	9	35	14	124	6,135	16,351	7,698	70,883	109,878	210,945
West North Central :	46	39	24	52	13	174	9,360	20,358	20,718	97,493	85,346	233,275
South Atlantic	17	18	13	52	13	113	4,736	9,319	10,365	118,811	73,980	217,211
South Central	14	12	16	31	11	84	3,389	6,482	13,302	65,171	87,734	176,078
West	14	16	7	29	11	77	3,308	8,066	5,982	61,815	185,891	265,062
Total	3/136	141	85	252	75	689	29,143	74,244	71,649	517,981	632,083	1,325,100

1/ Five-week average mostly mid-April to mid-May.

2/ Five-week average mostly March to early April.

3/ Includes 3 firms reporting no eggs received from farmers.

Compiled from unpublished data of Poultry Division, Consumer and Marketing Service, USDA.

Appendix table 25.--Food manufacturing establishments, by size of work force, 1963, 1958, 1954, and 1947 1/

Industry and year	Total establishments:	Establishments with an average of--			
		1-19	20-99	100-499	500 or more
		employees	employees	employees	employees
	Number	Number	Number	Number	Number
Flour and meal:					
1963	618	400	151	64	3
1958	814	564	171	75	4
1954	803	543	175	80	5
1947	1,243	860	284	93	6
Cereal preparations:					
1963	48	18	15	9	6
1958	43	18	11	9	5
1954	46	19	13	8	6
1947	64	34	14	10	6
Rice milling:					
1963	74	25	38	11	--
1958	72	21	42	9	--
1954	80	22	51	7	--
1947	88	29	49	10	--
Blended and prepared flour:					
1963	165	105	39	20	1
1958	117	87	18	10	2
1954	131	97	21	11	2
1947	122	91	23	8	--
Wet corn milling:					
1963	60	40	6	5	9
1958	59	33	12	5	9
1954	58	37	9	3	9
1947	55	34	9	4	8
Bread and related products:					
1963	5,010	3,106	1,212	647	45
1958	5,985	3,836	1,441	665	43
1954	6,103	4,079	1,371	611	42
1947	6,797	4,478	1,747	534	38
Biscuits and crackers:					
1963	356	148	124	55	29
1958	334	131	115	61	27
1954	311	143	78	62	28
1947	326	139	84	78	25
Macaroni and spaghetti:					
1963	221	151	44	26	--
1958	214	138	55	21	--
1954	233	149	64	20	--
1947	226	135	69	21	1

Continued--

Appendix table 25.--Food manufacturing establishments, by size of work force, 1963, 1958, 1954, and 1947--Continued

Industry and year	Total establishments:	Establishments with an average of--			
		1-19	20-99	100-499	500 or more
		employees	employees	employees	employees
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Canned fruits and vegetables:					
1963	1,430	594	547	266	23
1958	1,607	694	627	266	20
1954	1,758	760	715	254	29
1947	2,265	1,027	926	285	27
Dehydrated fruits and vegetables:					
1963	176	96	57	20	3
1958	161	94	41	25	1
1954	148	84	42	21	1
1947	146	96	40	10	--
Pickles and sauces:					
1963	588	404	128	55	1
1958	619	414	157	47	1
1954	717	497	161	58	1
1947	743	494	200	46	3
Frozen fruits and vegetables:					
1963	650	304	194	136	16
1958	426	163	138	111	14
1954	266	98	104	59	5
1947	291	111	128	51	1
Cottonseed oil mills:					
1963	188	35	140	13	--
1958	214	51	151	12	--
1954	286	48	219	19	--
1947	315	53	246	16	--
Soybean oil mills:					
1963	102	31	58	13	--
1958	117	34	66	15	2
1954	88	19	50	18	1
1947	133	55	63	14	1
Shortening and cooking: oil:					
1963	115	29	39	43	4
1958	105	25	36	41	3
1954	135	54	34	45	2
1947	127	55	37	33	2

1/ Data based upon classification used in census for the year shown. For some industries classifications are not strictly comparable between 1954, 1958 and 1963. Likewise revisions in data for bread and related products industry for 1958 are not shown.

Compiled from Census of Manufactures, 1963, 1958, 1954, and 1947.

Appendix table 26.--General line grocery merchant wholesale establishments: Percentage and share of sales to class of customer, by kind of business, 1963 and 1948

Kind of business	Percentage of sales to--											
	Retailers			Industrial, commercial, etc., users			Wholesalers			Farmers and consumers		
	1963	1948		1963	1948		1963	1948		1963	1948	
	Per- cent	Per- cent		Per- cent	Per- cent		Per- cent	Per- cent		Per- cent	Per- cent	
Wholesale establishments:												
Affiliated	96.0	95.0		3.0	3.5		0.8	1.3		0.1	0.1	
Nonaffiliated	77.8	88.4		15.4	8.2		2.5	2.0		.6	.4	
Total	90.9	90.9		6.5	6.4		1.3	1.8		.2	.3	
Share of sales												
Wholesale establishments:												
Affiliated	76.1	40.0		33.8	21.0		46.2	27.1		30.2	11.2	
Nonaffiliated	23.9	60.0		66.2	79.0		53.8	72.3		69.8	88.8	
Total	100.0	100.0		100.0	100.0		100.0	100.0		100.0	100.0	

Compiled from Census of Business--Wholesale Trade, 1963 and 1948.

Appendix table 27.--Eating places: Number and total sales, by sales-size of establishment, 1963, 1958, 1954 and 1948 1/

Annual sales per establishment	Establishments <u>2/</u>				Percentage change 1963 from 1948
	1963	1958	1954	1948	
Thousand dollars:	Number	Number	Number	Number	Percent
Less than 50 ...:	125,442	151,469	133,086	120,694	4
50-99	33,498	27,959	25,080	19,525	72
100-299	24,230	17,071	12,853	9,023	169
300-499	4,011	2,464	1,753	1,016	295
500 or more:	2,420	1,525	1,041	675	259
Total	189,601	200,488	173,813	150,933	26
	Sales <u>2/</u>				
	Million dollars	Million dollars	Million dollars	Million dollars	Percent
Less than 50 ...:	2,672	3,031	2,695	2,186	22
50-99	2,332	1,927	1,715	1,339	74
100-299	3,985	2,746	2,027	1,413	182
300-499	1,512	933	660	386	292
500 or more:	2,066	1,301	911	547	278
Total	12,567	9,937	8,008	5,871	114

1/ Data are not strictly comparable because definitions changed in each census year. See footnotes 1 and 2, table 18, p. 51.

2/ Includes only stores operated the entire year.

Compiled from Census of Business--Retail Trade, 1963.

Appendix table 28.--Eating places: Number and total sales, by legal form of organization and sales size group, 1963

Annual sales per establishment	Establishments <u>1/</u>			
	Individual proprietorship	Partnerships	Cooperatives and others	Corporations
<u>Thousand dollars</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Less than 50	101,180	15,683	897	7,682
50-99	19,447	5,967	179	7,905
100-299	8,105	3,871	144	12,110
300-499	503	409	31	3,068
500 or more	186	149	9	2,076
Total	129,421	26,079	1,260	32,841
	Sales <u>1/</u>			
	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>	<u>Million dollars</u>
Less than 50	2,054	381	17	219
50-99	1,326	417	12	577
100-299	1,228	<u>2/</u>	<u>2/</u>	2,118
300-499	185	151	12	1,164
500 or more	137	2/	2/	1,792
Total	4,930	1,692	73	5,871

1/ Stores operated entire year.

2/ Not revealed because of Census disclosure rules.

Compiled from Census of Business--Retail Trade, 1963.

